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A

TREATISE

ON THE

THEORY AND MANAGEMENT OF ULCERS, &c.

A

TREATISE

ON THE

THEORY AND MANAGEMENT OF ULCERS.

WITH A DISSERTATION

ON WHITE SWELLINGS OF THE JOINTS.

TO WHICH IS PREFIXED,

AN ESSAY ON THE CHIRURGICAL TREATMENT OF INFLAMMATION and its CONSEQUENCES.

BY

BENJAMIN BELL,

Member of the College of Surgeons of Edinburgh, and one of the Surgeons to the ROYAL INFIRMARY of that City.

Ad utilitatem vitæ omnia consilia factaque nostra dirigenda sunt. TACIT.

EDINBURGH:

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M,DCC,LXXVIII.

TO

PERCIVALL POTT, Esq;

F. R. S.

And Surgeon to St Bartholomew's Hospital, London.

Sir,

THE extenſive practice in which you have been long engaged, and the many uſeful improvements, founded on experience, which you have introduced into Surgery, deſervedly raiſe you to an eminent rank in your profeſſion.

This alone would induce any practitioner to court the honour of your protection to his firſt publication. But I might juſtly be accuſed of ingratitude, if I did not alſo ſeize this occaſion of publicly acknowledging my obligations to you, and of expreſſing my grateful ſenſe of the advantages which I enjoyed, when

I had an opportunity, not only of obſerving your practice in Surgery, but of becoming acquainted with the principles and opinions by which it was directed.

To render theſe ſentiments of my reſpect and gratitude as public as they are ſincere, was my only view in this addreſs. To ſay more, or to aſſume the uſual language of dedication, would, I know, be offenſive to you. Permit me to add, that I am, with great reſpect,

SIR,

Your obliged,

And obedient humble ſervant,

BENJAMIN BELL.

EDINBURGH,
March 3. 1778.

PRE-

PREFACE.

SINCE the commencement of the preſent century, very conſiderable improvements have been introduced, both in Medicine and in Surgery. The latter, particularly, during the courſe of this period, ſeems to have been enriched with more real knowledge, than it was ever before poſſeſſed of.

FROM this conſideration, it may poſſibly be alledged by ſome, that nothing new can now be offered on the ſubject of Surgery, and therefore, that any farther publication in that line, muſt, in ſome meaſure, be ſuperfluous. Although much, however, has been wrote, and a great deal of light thrown upon the principal and more leading parts of Surgery, yet ſtill, from leſs attention having been paid to ſome of its branches, there are many chirurgical diſeaſes, which are neither ſo well underſtood, nor ſo accurately treated as we might otherwiſe have expected.

THIS ſeems, in a great meaſure, to proceed from the fame and reputation commonly acquired

ed by ſucceſs, in the more capital operations of Surgery, which having a greater effect with the public, than the moſt ſucceſsful treatment of complaints not *evidently* of ſo much conſequence, has naturally prevented practitioners from paying to diſeaſes of this nature, that attention which they certainly deſerve.

And in conſequence of this, though the real operative part of the profeſſion, is, in general, carried to as great perfection, as it may probably ever attain, yet Surgeons daily meet with diſorders which baffle all their ingenuity, and by their failure in which, not only their own private reputations, but that of the art in general, ſuffers more than can be ever compenſated for by *any temporary eclat* from an operation.

Many complaints might be enumerated, which have ſuffered from ſuch neglect, but none, it is preſumed, are, in general, leſs underſtood, than ſome of thoſe which make the ſubjects of the following Eſſays: The theory and treatment of Ulcers eſpecially, although a great deal has been wrote concerning them, are ſtill very defective: The deſcriptions given of them by authors, are

ſo

ſo tedious, and the diſtinctions ſo complicated and various, that to a young practitioner particularly, it is no eaſy matter, either to comprehend rightly ſuch diſtinctions, or to apply the different remedies recommended for each.

Applications and Medicines for ulcers, as pointed out by foreign writers eſpecially, are, indeed, ſo numerous, and frequently ſo contradictory, that even the oldeſt practitioners find it impoſſible to reconcile them to reaſon; but they being generally introduced as in conſequence of experience, that circumſtance alone, makes them too frequently adopted, without being examined into: Whereas, a little attention would render it evident, that few publications on this ſubject, which have appeared for perhaps a century paſt, contain any thing new, but have been in general, merely copied by one author from another.

It was this, together with meeting with more frequent diſappointments in the cure of ulcers, than of any other complaint, which made me firſt pay more particular attention to their management. In conſequence of which, I found a much leſs complicated treatment than had been generally

generally recommended, prove more efficacious, and a great deal of trouble ſaved thereby, both to myſelf and patients: How far the ſame methods may with others be found to ſucceed, I ſhall not pretend to ſay: This, however, I muſt obſerve, that there is nothing recommended in the following ſheets, but what has been confirmed by repeated experience.

I am far from imagining, however, that any thing I have to advance, either exhauſts the ſubject, or renders farther improvements in it unneceſſary; but whatever deficiencies the preſent publication may labour under, this advantage, may, at leaſt, be expected from it, that it will point out to others, a material branch of the profeſſion, which, for a long time, has been very much neglected; a ſubject too, that ſtill deſerves their attention, and in which many uſeful improvements are yet probably to be made.

The treatiſe on Inflammation and its conſequences, was read ſeveral years ago, before the College of Surgeons of this place, and as it was approved of by ſome of my friends, I now inſert it here with ſome additions and alterations: Many

Many of the obſervations too, which occur on inflammation, applying with equal propriety to different circumſtances of ulcers, the conſideration of that ſubject, could not, it was preſumed, be any where more properly introduced.

White Swellings of the joints, is another complaint, in the treatment of which we are exceedingly deficient, and I am ſorry to obſerve, that what I have to offer upon it, does not tend ſo much to its farther elucidation as I could have wiſhed. But no regular account having ever been given of white Swellings, and as I have had many opportunities, both of ſeeing ſuch complaints treated in the ordinary way, and of diſſecting the diſeaſed joints after amputation, it would not, I thought, to many, prove unacceptable, to have a full account of the latter, together with a general detail of the effects produced by the former.

Both theſe I have endeavoured accurately to do, but having nothing altogether ſatisfactory on the method of cure to communicate, prolixity on any other part of the ſubject, would not, I know, to the generality of practitioners, prove very acceptable.

I muſt here obſerve, however, that although nothing very material be pointed out, in the treatment of the more inveterate ſpecies of white Swelling, yet the diſtinction propoſed to be eſtabliſhed, of ſuch diſorders, into two diſtinct ſpecies, is a matter of no inconſiderable importance: For, ſwellings of this nature, being evidently produced by two ſets of very different cauſes, the one occaſioning a diſeaſe, which will probably be always conſidered as incurable, and the other a complaint, which may frequently not only be palliated, but even completely carried off, practitioners ought, therefore, in all ſuch diſorders, to be as accurate as poſſible in diſtinguiſhing the different cauſes which appear to have produced them; and not indiſcriminately to conſider every caſe of white Swelling as incurable, and to proceed accordingly, as is generally done, to immediate amputation.

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CHI-

CHIRURGICAL ESSAYS.

PART I.

On INFLAMMATION and its conſequences.

SECTION I.

Of the Symptoms and Cauſes of Inflammation.

INFLAMMATION being, in many diſorders, eſpecially in Wounds, Contuſions, and Ulcers, the moſt troubleſome ſymptom that Surgeons have to contend with; a thorough inveſtigation of its cauſes, and of the method of treatment moſt ſuitable to its removal, muſt, to every practitioner, be an object of the greateſt conſequence; and is, of courſe, a ſufficient reaſon

for its conſideration, being introduced as one of the firſt articles in every chirurgical diſſertation.

INFLAMMATION, it is well-known, is a diſorder, to which every organiſed part of the body is liable; but as its attacks upon any of the internal parts, are generally attended with other, and ſometimes very different ſymptoms, that more properly in the treatment belong to the province of Medicine; it is not, therefore, here intended to enter into the diſcuſſion of ſuch; but merely to conſider the complaint, with its ſeveral conſequences, as it is moſt frequently obſerved to occur externally. And as the greateſt part of the phenomena that in general attend it, will be underſtood from the conſideration of phlegmon or local inflammation, it is propoſed more particularly to confine the different obſervations to that ſpecies of the diſorder.

§ 1. *Of the Symptoms and Terminations of Phlegmon.*

PHLEGMON is a term commonly applied to a circumſcribed tumor, attended with heat, redneſs

neſs, tenſion, and a throbbing pain. Theſe are the firſt appearances obſerved in every caſe of phlegmon; and when they are ſlight, and the part affected of no great extent, they have commonly very little, and ſometimes no apparent influence on the general ſyſtem. But, when more conſiderable, and the inflammation extenſive, a full, quick, and generally a hard pulſe takes place; and the patient, at the ſame time, complains of univerſal heat, thirſt, and other ſymptoms of fever.

IF, either by an effort of nature, or by the application of proper remedies, the pain, heat, and tenſion are removed, the other ſymptoms taken notice of, and which, in a great meaſure, or altogether depended on theſe, likewiſe abate, and the patient ſoon gets well. This is reckoned the firſt, and is generally the moſt deſireable mode of termination for the diſorder; and is termed Reſolution.

IF, however, in the courſe of a ſhort time, and that, notwithſtanding the uſe of different remedies, the ſeveral ſymptoms of heat, pain, and redneſs, inſtead of diminiſhing, rather increaſe;

if

if the febrile ſymptoms are likewiſe augmented, and the tumor gradually acquires a larger ſize, turns ſoft, ſomewhat prominent in the middle, or towards its moſt depending part, gets a clear ſhining appearance, and becomes leſs painful; the different ſymptoms of fever then abate, and a fluid, upon preſſure, is found to fluctuate underneath. This is another manner in which inflammation terminates, and is called Suppuration.

BUT if the pain, redneſs, and tenſion of the part increaſe, with the fulneſs of pulſe and other febrile ſymptoms, at the ſame time that there is little change in the tumor, in point of ſize, there is then great reaſon to ſuſpect, that Gangrene or Mortification will ſoon take place. Mortification firſt appears by a change of colour in the part, from a bright red to a leaden or livid caſt, with ſmall veſicles, containing a thin acrid ſerum diſperſed over its ſurface; the pain abates, the pulſe ſinks, but continues frequent; the tumor at laſt loſes its tenſeneſs, turns quite black and flaccid, and ſo terminates in a real mortified or dead ſpot.

THESE

THESE are the ſeveral ordinary conſequences of inflammation. By many authors, however, another diſorder has been treated of as one of its terminations, *viz.* Schirrus. But although that complaint does perhaps, in ſome inſtances, ſucceed to inflammation, yet it is far from being a common conſequence of it; ſo that, though inflammatory affections may juſtly enough be mentioned as one of the many exciting cauſes of Schirrus; yet the conſideration of that diſorder can never, with propriety, it is imagined, be introduced in a Treatiſe on Inflammation.

THE different appearances that in general occur in phlegmon, being thus pointed out, together with the manner in which they uſually terminate; I ſhall now proceed to the conſideration of the moſt frequent exciting cauſes of the diſorder, together with that, which appears moſt probably to be the immediate or proximate cauſe, and ſhall conclude with the prognoſis, and method of treatment, adapted to the ſeveral modes in which the diſeaſe is found to terminate.

§ 2.

§ 2. *Of the exciting and predispoſing Cauſes of Inflammation.*

THE exciting cauſes of inflammation, are in general whatever tend to ſtimulate, or produce pain and irritation. Such as wounds of all kinds, whether ſimple, lacerated, or punctured, and, with whatever inſtrument they may be produced. Alſo bruiſes and burns, whether by the actual or potential cautery; likewiſe all corroſive irritating applications, as the different ſtrong accids, Cantharides and all the claſs of rubefacientia: Ligatures may likewiſe be mentioned, and tumors that act as ligatures and ſtimulants, on any of the blood veſſels and nerves; as alſo, violent exerciſe of any particular member, and cold applied to a particular part.

THESE are the moſt common external cauſes of phlegmon, but there are ſome others, which tend to the ſame effect, that are to be conſidered entirely as of an internal kind; ſuch are the different vitiated ſtates of the fluids, excited by the preſence of morbid matters of different kinds, as thoſe of Lues Venerea, ſmall Pox, Meaſles, and Scrophula. Fevers too that end in critical inflammations

mations and conſequent abceſſes, ſeem likewiſe to act in the ſame manner.

UNDER one or other of theſe heads, are comprehended, it is imagined, almoſt all the exciting cauſes of inflammation. It is not improper, however, here to obſerve, that there are other cauſes, which, with propriety, may be ſaid to be of the prediſpoſing kind; as tending to produce ſuch a ſtate of the ſyſtem, as renders it more ſuſceptible of inflammatory complaints than naturally it ought to be. The moſt remarkable of theſe, is, a full plethoric habit of body, induced either by a very nouriſhing diet, or want of exerciſe; or, perhaps, by a combination of both. Theſe diſorders too, are obſerved to be more frequent in young than in old people, and in men than in women.

§ 3. *Of the proximate Cauſe of Inflammation.*

VARIOUS opinions have been delivered with reſpect to the proximate cauſe of inflammation; many of which, not having much probability to ſupport them, have never been generally admitted, and others, after having prevailed for a time, have at laſt too been rejected.

THE

THE doctrine on this ſubject, which for ſome years has prevailed at this Univerſity, as it readily accounts for the action of the ſeveral exciting cauſes of inflammation, for the effects of the diſorder, and for the operation of the medicines had recourſe to in the cure, will in future, therefore, be moſt probably conſidered as the proximate cauſe of all inflammatory affections.

FROM obſerving the different phenomena which occur in inflammation, an increaſed action in the veſſels of the part affected, ſeems in every caſe evidently to take place; and as from an increaſed action in the arteries of a part, all the circumſtances of inflammation are eaſily explained, we are induced therefore, to conſider ſuch a ſtate of the veſſels as the proximate cauſe of the diſorder.

THIS opinion, as already obſerved, is greatly ſupported, from a review of the ſeveral exciting cauſes of inflammation; which being in general of an irritating or ſtimulating nature, their application to any living or ſenſible parts, muſt of courſe be always attended with a preternatural exertion of the veſſels in ſuch parts. Thus, to

reaſon

reaſon from analogy, we obſerve, that ſternutatories applied to the internal membrane of the noſe; the aliments to the ſtomach and inteſtines; and the blood to the internal ſurfaces of the veſſels; all ſerve as ſo many ſtimulants to action in theſe different parts; and, in the ſame manner, corroſive or other irritating ſubſtances, when applied to the coats of the arteries, naturally in them produce the ſame effects as in other muſcular organs.

IN this manner, we obviouſly account for the action of all direct ſtimulants in the production of inflammation. It frequently happens, however, that inflammation occurs when the application of ſtimulants, or irritating ſubſtances, cannot in any degree be ſuſpected. In ſuch caſes, the increaſed action of the arteries, and of the heart, when it occurs, ſeems to be ſupported by a ſpaſm or conſtriction of the extreme veſſels, either of a particular part, or of the general ſyſtem. And hence, from the known tonic or aſtringent power of cold, we account for the frequent occurrence of inflammatory affections, in our cold ſeaſons of winter and ſpring; and hence too, the throat and lungs are more eſpecially ſub-

ject to diſorders attended with inflammation, from theſe parts being more particularly liable to the immediate action of cold.

Dr CULLEN, who conſiders ſpaſm as the ſole proximate cauſe of inflammation, when treating on this ſubject, ſays, " That a ſpaſm of the extreme veſſels takes place in inflammation, is preſumed from what is at the ſame time the ſtate of the whole arterial ſyſtem. In all conſiderable inflammations, though ariſing in one part only, an affection is communicated to the whole ſyſtem; in conſequence of which, an inflammation is readily produced in other parts beſides that firſt affected. This general affection is well known to Phyſicians, under the name of *Diatheſis Phlogiſtica*. It moſt commonly appears in perſons of the moſt rigid fibres; is often manifeſtly induced by the tonic or aſtringent power of cold; is increaſed by all tonic and ſtimulant powers applied to the body; is always attended by a hardneſs of the pulſe; and is moſt effectually taken off, by the relaxing power of blood-letting. From theſe circumſtances, it is probable, that the diatheſis phlogiſtica conſiſts in an increaſed tone, or contractility, and perhaps contraction

traction of the muſcular fibres of the whole arterial ſyſtem *."

AN increaſed action in the veſſels of a part, being admitted as the proximate cauſe of inflammation, we can pretty certainly aſcertain the operation of the ſeveral prediſpoſing cauſes; and upon the ſame ſuppoſition may be explained the different ſymptoms which occur in the courſe of the diſorder.

THUS the increaſed action of an artery, by forcing or propelling into the ſmaller ſets of veſſels, red globules, and other groſs parts of the blood which they cannot eaſily tranſmit, very readily accounts for the redneſs, tumor, tenſion and throbbing pain that occur in every caſe of phlegmon. As likewiſe in ſome meaſure for the augmentation of heat, which, in ſuch caſes, always takes place, by the increaſed attrition that from ſuch a cauſe muſt undoubtedly be produced. It is probable, however, that the accumulation of animal heat alone, which muſt neceſſarily ariſe from a larger proportion of blood being ſent to a part, than what naturally it ſhould receive,

* See Firſt Lines of the Practice of Phyſic, p. 188.

ceive, will have a conſiderable influence in the production of an increaſed degree of heat.

THE method of cure, as already obſerved, tends alſo to confirm the general doctrine with reſpect to the cauſe. Thus the moſt effectual remedies, in almoſt every caſe of inflammation, are exactly ſuch, as would be recommended for the removal of an increaſed tone in any particular part, were we convinced that that alone was the diſeaſe, *viz.* A low diet, blood-letting, with other weakning evacuations, together with emollient ſedative applications; but this, when we come to ſpeak more particularly of the different remedies, will more fully appear.

IN almoſt every caſe of external inflammation, except, perhaps, when it is very extenſive, runs deep, and the different ſymptoms are all very violent, the *prognoſtic* ſhould in general be favourable. For, if Reſolution, which is the eaſieſt termination of the diſorder, is not effected, ſuppuration will moſt readily be the conſequence, and the danger attending it in that ſtate, if the conſtitution is otherwiſe healthy, is not commonly very conſiderable.

WHEN,

WHEN, however, the inflammed part is of any conſiderable extent, with the different local, and general ſymptoms of fever running high, a good deal of danger is then to be dreaded. For, independent of the riſk to the conſtitution from the fever itſelf, if the ſymptoms continue violent for any length of time, without ſhewing ſome tendency, either to Reſolution, or Suppuration, Gangrene will pretty certainly follow, and in what manner that may terminate, is always uncertain.

SECTION II.

Of the Treatment of Inflammation by Reſolution.

§ 1. *Reſolution of inflammed Tumors, in ſome inſtances, not to be attempted.*

IN the treatment of phlegmon, the principal circumſtance, in general, to be had in view, is its Reſolution; as being by much the ſafeſt, and moſt ſpeedy method of cure. I have ſaid, however,

however, only in general, as in ſome particular caſes it is otherwiſe, and reſolution by no means to be attempted.

THUS, inflammatory ſwellings, that occur in, or ſucceed to, fevers, and other internal diſorders, ought always to be brought to ſuppuration; for nature in that way, pointing out an exit for ſome ſuperabundancy of fluids that exiſts in the ſyſtem, it might probably be attended with danger to give her any interruption. It is, indeed, on the contrary, always in ſuch caſes the ſafeſt practice, to aſſiſt her as much as poſſible, by the uſe of ſuch applications, as will moſt readily bring the ſwellings to ſuppuration.

THERE are other tumors again, from an internal cauſe too, in which it is perhaps beſt to do nothing at all, either with a view to reſolve or ſuppurate, but juſt to leave them entirely to nature's management.

THUS in ſwellings of an inflammatory nature, that appear in ſcrophula, it might be dangerous to make uſe of repellent applications, at the ſame time that it is not often adviſeable to promote

mote their ſuppuration; their cure, when opened either by nature or art, proving always very tedious and troubleſome. And ſuch ſwellings, it is well known, may remain for a great length of time, without any ſort of riſk to the patient; ſo that it is probably, in general, moſt adviſeable never to meddle with them.

IN Lues Venerea too, as we are poſſeſſed of almoſt a certain antidote for the diſorder; and as buboes, and other inflammatory ſwellings that occur in it, are always, when opened, exceedingly troubleſome, and very difficult of cure, it is perhaps for theſe reaſons, the moſt prudent practice, always to endeavour their diſcuſſion. And that more eſpecially, as their being brought to ſuppuration, can by no means free the patient from the diſorder, but leaves him, on the contrary, under as great a neceſſity of undergoing a mercurial courſe, as if no evacuation from the tumor had taken place.

IN caſes of Eryſipilas likewiſe, which is a ſpecies of inflammation, but which is eaſily diſtinguiſhed from real phlegmon, by the colour of the inflammed part not being of ſuch a bright red, but having

having a more dark copper-like appearance; and by any ſwelling that occurs in it, not riſing evidently into a tumor, but being rather diffuſed, and ending as it were imperceptibly upon the ſurrounding parts. In ſuch caſes, it appears always to be the beſt practice, to attempt their diſcuſſion, as when ſwellings of that nature come to a ſuppuration, they never either afford good pus, nor heal kindly when opened.

So that, the only caſes, in which we ſhould not attempt the reſolution of inflammatory ſwellings, are ſuch, as are either of a ſcrophulous nature, or as appear to be evidently critical in ſome diſorder; and that, whether in fevers or internal diſorders of even a chronic nature. But whenever the exciting cauſehas been of an obvious external kind, and eſpecially, when the complaint is not as yet far advanced, we may then always proceed with ſafety and freedom in what is termed the Repelling Method.

§ 2. *Of the Remedies to be had recourſe to for the Reſolution of an inflammed part.*

IN incipient caſes of phlegmon, when the ſymptoms are not ſo violent as to have affected the general

general ſyſtem, topical remedies merely, with a due attention to regimen, often anſwer in reſolving them. But when, on the contrary, the inflammation runs high, with general ſymptoms of fever, it then becomes neceſſary, at the ſame time, to pay attention to theſe.

IN every caſe of phlegmon, it has commonly been the prevailing practice, to have recourſe to warm fomentations and cataplaſms; but as warm emollient applications of all kinds, have the moſt powerful influence, in promoting ſuppuration, as will hereafter be more particularly taken notice of, and as is allowed indeed by every practitioner; the uſe of ſuch remedies, while the reſolution of ſwellings is practicable, muſt, therefore, it is evident, be attended with very great impropriety.

THE firſt circumſtance to be attended to, in every caſe of phlegmon, when reſolution of the tumor is to be attempted, is the removal of all ſuch exciting cauſes of the diſorder, as may happen to preſent themſelves. Such as, extraneous bodies in wounds; pieces of fractured bones; luxations; and, in ſhort, whatever may appear

to have had the leaſt tendency in keeping up the inflammation.

OF all the various applications for an inflamed part, thoſe of a ſedative nature are chiefly to be depended on; and next to theſe emollients.

OF the former kind, are conſidered, all the different preparations of lead diſſolved in vinegar; and it is imagined too, that the vegetable acid by itſelf, likewiſe acts in the ſame manner.

As emollients, all the bland expreſſed oils are often uſed with advantage; as alſo ointments of ſoft conſiſtencies made with any of theſe and pure wax.

§ 3. *Remarks on the Preparations of Lead, and other ſedative Applications.*

IT is not, in any part of this Diſſertation, propoſed to enter into minute diſcuſſions, on the *modus operandi* of ſuch medicines as are recommended, as that would not only extend the length of it much farther than is intended; but to many, would probably appear very

very ſuperfluous. It may not, however, in ſome circumſtances be improper, to deviate ſo far from the general plan, as to render as obvious as poſſible, the propriety of what at any time may be advanced; for mere practical aſſertions, without at leaſt ſome foundation in reaſon, can never, it is imagined, prove either an uſeful, or an agreeable mode of communication.

WITH reſpect to the uſe of ſedative applications, in caſes of external inflammation; it is not by any means intended, to recommend, univerſally, the whole claſs of medicines, that, in different circumſtances, are found to be of that nature.

THUS opium, though one of the moſt powerful of all ſedatives, yet, as its external application to the human body, is always attended with ſome degree of irritation, however uſeful it may at times have been found, in ſome particular ſpecies of inflammatory affections, it will never probably, as an external application, become of general uſe in ſuch diſorders.

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WARM emollient fomentations too, though they no doubt are very powerful ſedatives, as tending, from their nature, more effectually to remove tenſion and pain, than perhaps any other remedy we are acquainted with; yet, from a great deal of experience of their effects, in different local inflammations, I have long been convinced, that when the reſolution of inflammed tumors is wiſhed for, ſuch applications are always very improper. As they conſtantly either tend to bring ſwellings of that nature to ſuppuration, that might otherwiſe have probably been diſcuſſed; or, when not attended with that effect, occaſion ſuch a relaxed ſtate of the parts, as renders the thorough removal of the diſorder always exceedingly tedious.

UPON a proper examination of all the different articles ſaid to be of a ſedative nature, ſimilar exceptions, to their uſe in inflammatory caſes, might perhaps be found to the greateſt part of them.

So far, however, as my experience goes, together with that of many others of this country, as well as of Mr Goulard and other French practitioners,

practioners, no ſuch reaſons have ever occurred againſt the uſe of lead and its preparations in ſuch caſes. On the contrary, indeed, it may be certainly affirmed, that, as diſcutients in inflamed tumors, they prove more ſerviceable by much than all the ordinary applications, to which, ſo far as I know, recourſe has ever been had.

AND, although Mr Goulard, in ſetting off a favourite remedy, has been induced to aſſert its influence to be more general, and more conſiderable, than it probably will ever be found to be; yet ſtill the world is much indebted to him, not, however, for a *new* medicine, as every preparation of lead, recommended by him, was formerly, in ſome form or other, known to every practitioner; but for introducing, to a *more general* uſe, a very effectual remedy, for the diſcuſſion of inflammatory ſwellings.

As to the preparations of lead, being here ſaid to be of a ſedative nature; the term, it is imagined, is far from being improperly employed; and that, not only from many of the more ſtriking effects of lead, when taken internally, being all evidently of a ſedative tendency, but, from its

its immediate and obvious operation, when applied externally to an inflamed part: Which, when the preparation is of a proper ſtrength, is almoſt conſtantly an abatement of the different ſymptoms of pain and tenſion, at the ſame time that there is communicated an agreeable ſoothing ſenſation to the part.

HAVING likewiſe, to a certain degree, in particular circumſtances, obſerved the ſame effects from the vegetable acid, it could not, it was imagined, be ſo properly taken notice of under any other head.

Mr GOULARD, in his diſſertation upon the external uſe of the preparations of lead, recommends them as almoſt equally proper in every ſtage of inflammation. Even when tumors have come to a full ſuppuration, a proper uſe, he ſays, of his *Extractum Saturni*, not by its repelling quality, for he will not allow it to be poſſeſſed of ſuch, but by its occaſioning an exudation of the contained matter, renders it almoſt always unneceſſary to open them.

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THE ſame remedy is likewiſe mentioned by him as a proper application in every caſe of Gangrene. From my own experience, however, of the preparations of lead, I cannot take upon me to recommend them in either of theſe caſes. I have indeed made trial of them in gangrenous caſes, but without any evident effects either one way or another; and, however ſtrongly recommended by Mr Goulard, in the cure of abceſſes or collections of completely formed pus, I muſt own, that, in that ſtate of the diſorder, I never did think of having recourſe to them. So that it is in the real inflammatory ſtate of the complaint only, and while a cure by diſcuſſion is ſtill expected, that ſuch applications are here meant to be adviſed.

FROM the known deleterious effects of lead, when introduced into the ſyſtem; an objection has, by ſome authors, been raiſed againſt a free uſe of the preparations of lead, even externally applied.

THAT lead, in different forms, has, when taken into the conſtitution, frequently proved poiſonous, there is no reaſon to doubt, and that, in

in ſome particular inſtances, diſagreeable ſymptoms have occurred, where ſome of the preparations of lead have been externally uſed; is alſo pretty certain. That ſuch bad ſymptoms, however, if they were not merely accidental from ſome other cauſe, are at leaſt in general, very rare effects of the remedy in queſtion, I can venture, I think, certainly to affirm. For, ſo far as I have had occaſion to employ the preparations of lead, and, in many caſes, particularly of burns, I have known the greateſt part of the whole ſurface of the body covered with them for days, nay, even for weeks together; and I do not recollect a ſingle inſtance of any diſagreeable ſymptom accruing from them.

OF all the preparations of lead for external uſe, *Saccharum Saturni* is perhaps equal, if not ſuperior to any, as it has all the advantages of the others, with this difference, that, in it, we are much more certain of the exact ſtrength of our preparation, than we ever can be with any other. For although, in the *Extrait de Saturn* of Goulard, as likewiſe in the *Acetum Lythargites* of our Diſpenſatories, which are both, it may be obſerved, very nearly the ſame; we may be very certain

tain of the quantity of lead employed to the vinegar, yet we can never, but by cryſtalliſation, know exactly, or even nearly, how much of the former the Menſtruum may have diſſolved, as that muſt depend upon a variety of accidents; and particularly, on the ſtrength of the acid, and exact degree of heat employed, which are circumſtances we have not always in our power exactly to regulate. For theſe reaſons, therefore, the ſalt, or ſugar of lead, as it is called, ſhould, for external uſe, be always preferred.

THE beſt mode of applying the remedy, ſeems to be in the form of a watery ſolution; for the preparation of which, the following proportions, in general, anſwer very well:

℞. Sacchar. ſaturn. unc. ſs.
Solve in acet. pur. unc. iv.
Et adde aq. fontan. deſtillat. lb. ii.

THE addition of vinegar, renders the ſolution much more complete, than it otherwiſe would be; and without it, indeed, a very conſiderable proportion of the lead generally ſeparates, and falls to the bottom.

IN making uſe of this ſolution, in caſes of inflammation, as it is of conſequence to have the parts affected kept conſtantly moiſt with it, cataplaſms prepared with it, and crumb of bread, in general anſwer that intention exceedingly well. But, when the inflamed part is ſo tender and painful, as not eaſily to bear the weight of a poultice, which is frequently the caſe, pieces of ſoft linen, moiſtened with the ſolution, anſwer the purpoſe tolerably well: Although, when there is not that objection to the uſe of cataplaſms, as they retain the moiſture longer, they ſhould always be preferred. But which ever of the two are had recourſe to, they ſhould always be applied cold, or, at leaſt, with no greater warmth than is merely neceſſary for preventing pain or uneaſineſs to the patient; they ſhould be kept almoſt conſtantly at the part, and renewed always before turning ſtiff or hard.

AMONG the remedies recommended for external uſe, in caſes of inflammation, were mentioned, emollients. Theſe, when the tenſion and irritation on the ſkin are conſiderable, are often attended with very great advantage; the parts affected, being, in ſuch a ſtate of the diſ-

order,

order, gently rubbed over with any of the mild expreſſed oils, two or three times a-day, the tenſion, irritation and pain, are often very much relieved, and the diſcuſſion of the tumor thereby greatly promoted.

IN every caſe of inflammation, indeed, emollient applications would afford ſome relief; but as the preparations of lead already recommended, prove in all ſuch diſorders, ſtill more advantageous; and as unguents of every kind, tend conſiderably to blunt the action of lead, theſe two ſets of remedies, ſhould as ſeldom as poſſible, be allowed to interfere with one another; and emollients ſhould accordingly, never be preſcribed, but when the circumſtances already mentioned, of irritation, tenſion and pain, are ſo conſiderable as to render their application altogether neceſſary.

UNCTUOUS ſubſtances, have too been condemned in ſuch caſes, upon a different principle; as tending to ſtop the pores, and, conſequently, to obſtruct the perſpiration of thoſe parts to which they are applied. It is not, however, probable, that in this way they could prove very hurtful in preventing

preventing the reſolution of inflammation; which muſt always, it is imagined, be effected in a very different manner than by perſpiration.

WHEN the part affected with inflammation, is not very tender, or lies deep, applications of the vegetable acid, are then often had recourſe to with conſiderable advantage; and the moſt effectual form of uſing it, ſeems to be by way of cataplaſm, made with the ſtrongeſt vinegar and crumb of bread. In ſuch caſes too, I have ſometimes thought, that an alternate uſe of this remedy, with the ſaturnine ſolution, as formerly recommended, has produced more beneficial effects, than are commonly obſerved from a continued courſe of any one of them.

AT the ſame time that theſe applications are continued, blooding with leeches, or cupping and ſcarifying, as near as poſſible to the part affected, is generally of very great ſervice; and in no caſe of local inflammation ſhould ever be omitted. In all ſuch caſes, the whole body, but more eſpecially the diſeaſed part, ſhould be preſerved as free as poſſible from every kind of motion; and the neceſſity of a low cooling diet, in every

every inflammatory diſorder, appears very obvious, as does alſo a total abſtinence from ſpirituous and fermented liquors.

IN ſlight caſes of inflammation, a due perſeverance in the ſeveral articles taken notice of, will, in general, be found ſufficient for every purpoſe. But, when there is likewiſe, a full, hard, or quick pulſe, with other ſymptoms of fever, general blood-letting becomes then always neceſſary; the quantity of blood taken away, being always to be determined by the violence of the diſorder, and by the age and ſtrength of the patient. The uſe of gentle laxatives too, together with cooling diaphoretic medicines, are always attended with very good effects.

THESE different evacuations being premiſed, the next object of conſequence, is to procure eaſe and quietneſs to the patient; which is often, in inflammatory caſes, of more real ſervice than any other circumſtance whatever. The moſt effectual remedy for this purpoſe is opium; which, when pain and irritation are conſiderable, as in extenſive inflammations very frequently happens, ſhould never be omitted. In large wounds,

wounds, eſpecially after Amputations and other capital operations; in punctures of all kinds too, large dozes of opium are always attended with remarkable good effects. In all ſuch caſes, however, opium, in order to have a proper influence, ſhould, as was obſerved, be adminiſtred in very large dozes; otherwiſe, inſtead of proving ſerviceable, it ſeems rather to have the contrary effect; a circumſtance, which is perhaps the chief reaſon for opiates in general, having been very unjuſtly condemned in every caſe of inflammation.

By a proper attention to the different circumſtances taken notice of, in the courſe of three or four days, and ſometimes in a ſhorter ſpace of time, reſolution of the tumor will in general begin to take place. At leaſt, before the end of that period, it may, for the moſt part, be known how the diſorder is to terminate. If the heat, pain, and other attending ſymptoms abate, and eſpecially if the tumor begins to decreaſe, without the occurrence of any gangrenous appearances, we may then be almoſt certain, that, by a continuance of the ſame plan, a total reſolution will in time be effected.

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BUT, on the contrary, if all the different ſymptoms rather increaſe, and eſpecially, as formerly remarked, if the tumor turns larger, and ſomewhat ſoft, with an increaſe of throbbing pain, we may then with tolerable certainty conclude, that ſuppuration will take place: And ſhould, therefore, immediately deſiſt from ſuch applications as were judged proper while a cure was thought practicable by reſolution; and endeavour to aſſiſt nature, as much as poſſible, in the formation of pus, or what is called *Maturation* of the Tumor.

FOR this reaſon, in every caſe of inflammation, the different evacuations, eſpecially that of blood-letting, which may have been adviſeable while the ſwelling was attempted to be diſcuſſed, ſhould never be carried a greater length than may be merely neceſſary for *moderating* the ſeveral febrile ſymptoms. For, by reducing the ſyſtem too much, and a ſuppuration afterwards taking place, its progreſs in that caſe, becomes always much more ſlow, and uncertain, than it would have been had a due attention been paid to theſe evacuations; nor will the patient be afterwards ſo able to bear, eſpecially if it is conſiderable,

ſiderable, the diſcharge that muſt neceſſarily enſue from opening the abſceſs.

ALTHOUGH it was remarked above, that if, in general, in the courſe of three or four days, there does not ſome appearances of reſolution occur, that ſuppuration will moſt probably take place; and that conſequently, a change of treatment becomes neceſſary; yet this, it muſt be obſerved, is only to be taken in a limited ſenſe. For the time of deſiſting from one mode of treatment and commencing the other, muſt always depend very much on the ſeat of the inflammation; ſuch diſorders being in ſome parts much more apt to terminate in a ſpeedy ſuppuration than in others.

THUS, in the cellular membrane, and in different ſoft parts, inflammatory diſorders of all kinds terminate much more readily and quickly, than when any of the tough membranous parts are affected. Hence, in the coats of the eye and of the teſticles, very violent inflammations often continue for many days, nay, even for weeks, without either abating in the ſymptoms, or ending in ſuppuration. In ſuch caſes, therefore, that

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go on to even a very conſiderable length, we need not be afraid of continuing the diſcutient applications for a much longer time than what, in general, would otherwiſe be proper: And ſhould never, therefore, be deterred from uſing them, unleſs either an evident ſuppuration has taken place, or there appears, from the violence of the ſymptoms, a certain riſk, either of Gangrene, or of ſome incurable obſtruction. In which event, we are no doubt, always to endeavour at procuring the ſuppuration of the tumor.

SECTION III.

Of SUPPURATION.

§ 1. *General Remarks on Suppuration.*

BY the term *Suppuration*, in general, is underſtood that proceſs, by which the contents of tumors and ulcers are converted into a whitiſh, thick, opaque, ſomewhat fœtid matter,

termed *Pus*. This, by many, has been conſidered as effected by a natural exertion of the ſyſtem; but art undoubtedly can, in all ſuch caſes, afford a great deal of aſſiſtance. Before going on, however, to conſider the neceſſary treatment for that effect, it will not be improper to examine attentively, the different opinions that have been offered with reſpect to Suppuration; and the more eſpecially, as it will tend conſiderably to elucidate many of the obſervations that will afterwards occur.

§ 2. *Of the Formation of Pus.*

BY many authors, Pus has been imagined to conſiſt in a diſſolution of the blood-veſſels, nerves, muſcles, and other ſolids, in the fluids of the parts in which inflammatory tumors occur.

THIS is the opinion of Boerhaave *, Platner †, and many others.

OTHERS, again, have ſuppoſed purulent matter to be formed in the blood; and that it is ſecreted,

* Aphoriſm, 387.

† V. Inſtitutiones Chirurgiæ, § 54, &c.

creted, in its complete ſtate, into Abſceſſes, Wounds, and Ulcers.

THE firſt of theſe opinions, ſeems ſufficiently confuted from this conſideration, that very extenſive wounds and ulcers continue often for a great length of time, without being attended with any loſs of ſubſtance; which they neceſſarily always would be, if their ſeveral diſcharges conſiſted in a diſſolution of the ſolids of the parts on which they were ſituated. Iſſues too, afford inſtances of the ſame kind, yielding, for a number of years, even a daily diſcharge of pus, without producing any evident alteration whatever in the ſtate of the ſolids.

THE other opinion has probably ariſen from abſceſſes being ſometimes obſerved to form ſuddenly, and without any evident previous inflammation; ſo that the matter contained in them has been ſuppoſed to be at once depoſited from the blood in its purulent ſtate.

PREVIOUS, however, to the formation of pus in any part, if due attention was given, ſome degree of inflammation, it is probable, would be always

always obſerved: But as inflammation, in many caſes, occurs in only a very ſlight degree, and without being attended with much pain; it may often, very readily, have proceeded to the ſtate of ſuppuration, without being ſooner obſerved by the patient; and this we know, in internal abſceſſes eſpecially, is not unfrequently the caſe. We are told, indeed, of very quick tranſlations of matter, from one part of the body to another; but if ſuch inſtances do ever occur without the intervention of inflammation, which is, however, much to be doubted; yet, ſtill, it is no material objection to our argument, as ſuch caſes can never be conſidered in any other light, than as *particular*, and very *unuſual* exertions of the ſyſtem.

IT may be remarked alſo, that if purulent matter frequently exiſted in the blood, as it undoubtedly would do, if the opinion now under conſideration was well founded; in ſome caſes, at leaſt, it would ſurely have been liable to detection; but no matter of that kind has, it is imagined, ever yet been diſcovered in it. Such pus too, as is found in wounds and ulcers, would not at firſt appear thin and ſerous, as it always does,

does, if depoſited, completely formed from the blood.

THE moſt probable opinion, hitherto advanced, with reſpect to the formation of pus, is, that it is a change produced by a certain degree of fermentation, upon the ſerous part of the blood, after its ſecretion into the cavities of ulcers and abſceſſes; and that in conſequence either of the natural heat of the part, or of heat artificially applied.

THAT it is the ſerum only of blood, which is proper for the formation of pus, and that it is produced by a certain degree of heat, was firſt rendered exceedingly probable, by an experiment of Sir John Pringle's *; and was afterwards fully confirmed by ſeveral others of the ſame nature, made by Mr Gaber, and related by him at full length in the ſecond Volume of the *Acta Taurinenſia*.

Sir JOHN PRINGLE found, that pure ſerum, kept for ſome days in a furnace, regulated to the human heat, after becoming turbid, dropped a white

* Appendix to Diſeaſes of the Army, experiment xlv.

white purulent ſediment. The craſſamentum of blood, in the ſame ſpace of time, and degree of heat, changed from a deep crimſon, to a dark livid colour; ſo that when any part of it was mixed with water, it appeared of a tawny hue. Serum, digeſted with a few red globules, and in the ſame circumſtances, was of the ſame colour.

Mr GABER's experiments, as already obſerved, all tend to elucidate and corroborate the ſame opinion, *viz.* That laudable pus is formed only from ſerum. The addition of red globules to ſerum, and craſſamentum digeſted by itſelf, exhibited much the ſame appearances, as thoſe lately quoted from Sir John Pringle*. Fat, which is thought by many to be a principal ingredient in the compoſition of pus, was found by Mr Gaber, when expoſed to the above-mentioned trial, to exhibit no appearances of that matter; nor were any of the fleſhy parts, digeſted either with ſerum or water, convertible into it.

FROM all which, it may be concluded, that the addition of any of theſe articles to ſerum, inſtead

* V. Act. Taurin. vol. 2, p 87.

inſtead of rendering it capable of producing good pus, have always the very contrary effect; and that it is pure ſerum alone, from which that matter can be obtained.

IT may here be remarked, once for all, that what is meant by *pure ſerum*, is not that finer halitus, which, in a healthy ſtate of the body, is conſtantly ſecreting into the different cavities, merely for the the purpoſe of lubricating, and keeping them moiſt; and which is again generally abſorbed; but is a ſerous fluid of the ſame nature with that which ſeparates ſpontaneouſly from blood, upon that fluid's being allowed to remain at reſt, on being diſcharged either from an artery or a vein. And in which, though there is never ſuppoſed to be any mixture of red globules, yet, there is certainly always more or leſs of the coagulable lymph; ſome proportion of which ſeems abſolutely neceſſary for ſerum to be poſſeſſed of, to render it capable of producing pus.

THE ſeveral effects already mentioned, produced by digeſtion upon ſerum out of the body, will very readily occur, it is imagined, from the ſame

ſame cauſes applied to it, when collected in the cavities of ulcers and abſceſſes; and, from the reſult of the different experiments alluded to, it is probable, that according as it is there depoſited more or leſs free from mixture of fat, red globules, and other ſubſtances, it will yield pus of a more pure or vitiated nature.

THIS account of the formation of pus, is the moſt ſatisfactory, it is conceived, of any that has as yet been given; and the more eſpecially, as it renders evident, as will afterwards appear, the operation of all the remedies commonly found moſt effectual in promoting ſuppuration.

§ 3. *Of the neceſſary Remedies for promoting Suppuration.*

FOR the different reaſons formerly taken notice of, ſuppuration of the inflamed part being at laſt reſolved on; all the remedies then enumerated, upon the ſuppoſition of a cure being to be obtained by reſolution, muſt immediately be laid aſide.

No farther evacuations, as was obſerved, are to be admitted, and if the patient has already been

been much weakened, a full allowance in point of diet, and even a proportion of wine, may probably be neceſſary.

For, although a very violent degree of inflammation, is always unfavourable to ſuppuration, as tending either to Gangrene, as will afterwards be taken notice of; or, as tending to propel into the cellular membrane, which, in general, is the ſeat of abſceſſes, a quantity of red globules, together with the ſerum of the blood, which laſt, from what has been already remarked, ſhould alone be extravaſated for the purpoſe of forming good pus; yet, in order to have a due quantity of ſerum ſecreted, for the purpoſe of ſuppuration, and, at the ſame time, to have its fermentation properly carried on, the different inflammatory ſymptoms muſt never be allowed to fall ſuddenly; otherwiſe an abſceſs of very ill digeſted matter, as it is termed, will moſt probably be produced.

Thus we find in ſmall pox, which are ſo many ſmall phlegmaſiæ, that a proper ſuppuration never takes place, if the patient has been much reduced by any conſiderable evacuations; and the

ſame thing very certainly occurs in ſimilar circumſtances, in abſceſſes of a larger ſize.

THE patient ſhould, therefore, be kept in a proper medium, not allowed to live ſo fully as to run any riſk of raiſing the inflammation too much; nor to be ſo reduced, by evacuations and a low diet, as to induce the contrary extreme. Having, in this manner, endeavoured to procure a diſcharge into the cellular membrane of ſerum, proper for the formation of pus; the next circumſtance to attend to, is, that a due fermentation be excited, and preſerved in it, ſo that its progreſs towards perfect maturation, may go eaſily and regularly on.

THIS indication is chiefly effected by the uſe of ſuch applications as tend to preſerve a proper and conſtant degree of heat in the part, in ſo much, that it ſeems probably owing to a want of attention to this circumſtance, that by much the greateſt part of all the ſofter ſwellings do not come to ſuppuration; and that, according to the degree of heat they are kept in, whether from the proportion of inflammation they are at firſt produced by, or from the natural heat of the

the part they are ſeated in, they form into tumors of melicerous, ſteatomatous, and other conſiſtencies. For unleſs, a due degree of heat be applied and continued, ſerum being merely extravaſated, will never produce pus; hence in aſcites, and other dropſical diſorders, large quantities of it remain in that ſtate for a great length of time, without any ſuppuration taking place, and that merely from ſuch collections being produced without any inflammation at firſt, ſo that no aſſiſtance is afforded from any degree of *preternatural* heat; and the *natural* heat of ſuch parts, as ſerous collections uſually occur in, is ſeldom conſiderable enough for ſuch an effect.

THE juſt degree of heat for the promotion of ſuppuration, is not perhaps eaſily to be determined; but the more conſiderable it is, at leaſt to a certain extent, the more quickly, it is probable, pus will be formed.

THIS we find, indeed, from Mr Gaber's experiments, is ſo far the caſe *, and the obſervation is

* When ſpeaking of pus being formed in, and ſubſiding from ſerum digeſted in a degree of heat equal to that of the human body, Mr Gaber ſays, "Eo autem citius ſubſidebat, quo calor erat major." Loco citato.

is likewiſe confirmed by daily experience, in every caſe of phlegmon, where the tumor *cæteris paribus* always proceeds quickly or ſlowly to ſuppuration, as it is ſeated near to, or at a diſtance from the heart. Hence, in any of the extremities, particularly in the legs, inflammatory diſorders are always very dilatory in proceeding to ſuppuration, while thoſe of the trunk, and about the head, go on very quickly: Thus, in many caſes of inflammation of the ears and throat, it is far from uncommon their arriving at a thorough maturation, and even burſting of themſelves, in the courſe of forty-eight hours from the firſt attack.

THIS conſideration, therefore, ſhould make us particularly attentive to the preſervation of a due degree of heat in every inflamed part, intended to be brought to ſuppuration; but more eſpecially in ſituations very diſtant from the heart, where artificial heat is moſt wanted, and where, by a proper application of it, almoſt every tumor, though ſituated on the extremities, might probably be induced to ſuppurate in the ſame ſpace of time with thoſe in the ears, and other parts lately taken notice of.

I AM not only convinced, by experience, of what is here aſſerted, of the very ſingular advantages to be obtained from a due attention to this matter; but alſo, from ſeveral experiments made upon the ſame ſubject ſome years ago: But as they turned out almoſt exactly ſimilar to thoſe related by Mr Gaber, ſuch attention was not given in preſerving the different reſults of them as otherwiſe ſhould have been; this, however, is particularly remembered, that in a heat equal to 100° of Farenheit's Thermometer, the depoſition of matter from ſerum took place, in little more than half the time that was requiſite for the ſame effect at even eighty degrees.

IT was the proſecution of theſe experiments, I muſt acknowledge, that firſt ſuggeſted to me the probability of the great advantages to be derived from the preſervation of a due degree of heat in inflamed parts; and I have accordingly, on many occaſions ſince that time, found the treatment of ſuch caſes go on much more eaſily than otherwiſe I ſhould either have expected, or have been able to account for.

THE

THE method commonly had recourſe to, for the application of heat to an inflamed part, is by means of warm fomentations and cataplaſms; and when theſe are regularly and frequently renewed, nothing, it is probable, could more effectually anſwer the purpoſe. But, in the ordinary manner in which they are applied, by the cataplaſms being renewed only once, or, at moſt, twice a-day, they muſt always, it is imagined, do more harm than good. For, ſo ſoon as the degree of heat they were at firſt poſſeſſed of, is diſſipated, the moiſture kept up by them, with the conſequent evaporation that enſues, muſt always render the part a great deal colder than if it had been merely wrapped in flannel without the uſe of any ſuch application.

IN order to receive all the advantages of ſuch remedies, the part affected ſhould be well fomented with flannels preſſed out of any warm emollient decoction, applied as warm as the patient can eaſily bear them, continued at leaſt half an hour at once, and renewed four times a-day.

IMMEDIATELY

IMMEDIATELY after the fomentation is over, a large emollient poultice ſhould likewiſe be applied warm, and renewed every ſecond or third hour at fartheſt. Of all the forms recommended for emollient cataplaſms, a common milk and bread poultice, with a proportion of butter or oil, is perhaps the moſt eligible; as it not only poſſeſſes all the advantages of the others, but can at all times be more eaſily obtained.

ROASTED onions, garlick, and other acrid ſubſtances, are frequently made uſe of as additions to maturating cataplaſms: When there is not a due degree of inflammation in the tumor, and when it appears probable, that the ſuppuration would be quickened, by having the inflammatory ſymptoms ſomewhat increaſed, the addition of ſuch ſubſtances may then be of ſervice; but when ſtimulants *are* neceſſary, in ſuch caſes, a ſmall proportion of ſtrained galbanum, or of any of the warm gums, diſſolved in the yolk of an egg and added to the poultices, is not only a more elegant, but a more certain form of applying them.

WHENEVER

WHENEVER the inflammation, however, is in a proper degree, ſuch ſtimulating ſubſtances never can be neceſſary; and, from the different obſervations already thrown out, in many caſes, it is apprehended, they may even do miſchief.

IN ſuch tumors as from their being poſſeſſed of little or no inflammation, are commonly ſaid to be of a *cold* nature, as they are generally indolent and proceed very ſlowly to ſuppuration, plaiſters compoſed of the warm gums, are often had recourſe to with conſiderable advantage; in ſuch caſes, they are not only of uſe by the ſtimulus and irritation they occaſion, but by the heat which they tend to preſerve in the part. They become particulary neceſſary, when the patient, by being obliged to go abroad, cannot have cataplaſms frequently enough renewed, or ſo conveniently applied; but when ſome ſuch objection does not occur, the latter, for very obvious reaſons, ſhould always be preferred.

DRY cupping, as it is termed; that is, cupping without the uſe of the ſcarificator, upon, or as near as poſſible to the part affected, is frequently had recourſe to with advantage, in promoting

moting the ſuppuration of tumors: It is only, however, in ſuch as theſe laſt mentioned, where there ſeems to be a deficiency of inflammation, that it can ever either be neceſſary or uſeful; but, in all tumors of a real indolent nature, and where there is ſtill ſome probability of a ſuppuration being effected, I have ſeldom obſerved ſuch effects from any other remedy.

These different applications, under the reſtrictions taken notice of, being continued for a longer or ſhorter time, according to the ſize of the tumor, its ſituation, and other circumſtances; a thorough ſuppuration may in general at laſt be expected.

Matter being fully formed in a tumor, is known by a remiſſion of all the ſymptoms taking place; the *dolor pulſatilis* that before was frequent, now goes off, and the patient complains of a more dull, conſtant heavy pain; the tumor points at ſome particular part, generally near to its middle, where, if the matter is not encyſted, or deep ſeated, a whitiſh yellow appearance is obſerved, inſtead of a deep red that formerly took place; and a fluctuation of a fluid under-

neath, is, upon preſſure, very evidently diſcovered. Sometimes, indeed, when an abſceſs is thickly covered with muſcular and other parts, and when, from concurring circumſtances, there can be little doubt of there being even a very conſiderable collection of matter, yet the fluctuation cannot be readily diſtinguiſhed; but is not *often* ſo very deeply lodged, but that, with proper attention, it may be diſcovered.

THIS, however, is a circumſtance of the greateſt conſequence in practice, and deſerves, it may be remarked, more attention than is commonly given to it. In no part of the Surgeon's employment, is experience in former ſimilar caſes, of greater uſe to him than in the preſent; and however ſimple it may appear, yet nothing more readily diſtinguiſhes a man of obſervation and extenſive practice, than his being able eaſily to detect collections of deep ſeated matter: Whilſt nothing, on the contrary, ſo materially affects the character of a Surgeon, than his having, in ſuch caſes, given an inaccurate or unjuſt prognoſis; as the event, in diſorders of that nature, comes generally at laſt to be clearly demonſtrated to all concerned.

TOGETHER

Together with the ſeveral local ſymptoms of the preſence of pus, already enumerated, may be mentioned the frequent ſhiverings that patients are liable to on its firſt formation; theſe, however, ſeldom occur ſo as to be diſtinctly obſerved, unleſs the collection is conſiderable, or ſeated internally in ſome of the viſcera.

§ 4. *Of Abſceſſes, and the proper period for opening them.*

In the treatment of abſceſſes, it is a general rule not to open them till a thorough ſuppuration has taken place; as, when laid open long before that period, and while any conſiderable hardneſs remains, they commonly prove more troubleſome, and ſeldom heal ſo kindly.

In ſome caſes, however, it is neceſſary to deviate from this general rule, and to open them a good deal ſooner; particularly in all ſuch critical abſceſſes as occur in malignant fevers. In the plague too, we are commonly adviſed to open ſuch tumors, ſo ſoon as they are at all tolerably advanced, and not to wait till they are fully maturated; as, from experience in theſe diſorders, it

it is found to be of more conſequence, for the removal of the original diſeaſe, to have a quick diſcharge of matter produced, than any harm the patient can ever ſuffer from having a ſwelling ſomewhat prematurely laid open.

IN abſceſſes too, ſituated on any of the joints, or upon either of the large cavities of the breaſt and abdomen, and more eſpecially when they ſeem to run deep, they ſhould always be opened as ſoon as the leaſt fluctuation of matter is diſcovered. For, when the reſiſtance is on every ſide equal, they juſt as readily point internally as outwardly; and the conſequence of a large abſceſs, burſting into either of the larger cavities eſpecially, is well known moſt frequently to prove fatal: An inſtance of which, in the following caſe, I had ſometime ago an opportunity of obſerving, which, with very little attention, might have been prevented.

A SURGEON of eminence, and of very extenſive practice, was applied to by a young healthy-looking man, with a large abſceſs upon the left ſide of his cheſt. A fluctuation of a fluid was, upon preſſure, very evidently diſcovered; and it was

was agreed, by other two practitioners that were preſent, that an opening ſhould be made to give vent to the matter. But the operator, being much engaged in buſineſs, could not fix on an earlier period for doing it than the third day from the patient's firſt applying to him; unluckily, however, the patient died ſuddenly in his bed the night before the abſceſs was to have been opened.

ON examining the body, the tumor had diſappeared entirely, without any external opening being obſervable; and, on opening the Thorax, it was found to have burſt inwardly upon the lungs, and ſo had produced immediate ſuffocation.

IN every other circumſtance, however, except in the caſes alluded to, the rule in opening abſceſſes, is, as already obſerved, to allow a thorough ſuppuration to take place, before any vent whatever be given to the matter; and it being then determined to lay the collection open, the next queſtion that occurs, is with reſpect to the manner of doing it.

§ 5.

§ 5. *Of the different Methods of opening Abſceſſes.*

Two different methods of opening abſceſſes have been recommended by authors, *viz.* by Cauſtic, and Inciſion. To the former, however, there are many objections: It is not attended with any ſuperior advantage to a ſimple inciſion; upon a tender inflamed part, it gives much more pain; it is more ſlow in its effects; and the Surgeon never has the command of it ſo entirely as to deſtroy thoſe parts he would incline, and no more; for all the different kinds of cauſtic, notwithſtanding the greateſt attention, will ſometimes ſpread farther, and penetrate deeper, than was either wiſhed for or intended. Of this, ſome years ago, I ſaw a very remarkable inſtance, and in ſuch a ſituation too, as might be imagined it would be more unlikely to happen in than in almoſt any other.

CAUSTIC was applied to the anterior part of the Scrotum, with a view to a radical cure, in a caſe of hydrocele; but whether there had been very little water collected, or an adheſion of the *teſtis* to the *tunica vaginalis*, had, at that part, by ſome cauſe or other, been produced, is uncertain;

tain; but the cauſtic penetrated to the body of the teſticle, and gave the patient, as may readily be imagined, a great deal of very excruciating pain. It did, to be ſure, produce a cure, but the riſk of ſuch an accident happening, although it probably might not frequently occur, is, I ſhould imagine, a very ſtrong objection to the uſe of cauſtic in all ſuch caſes; and it is now indeed very generally, I believe, laid aſide, and the preference juſtly given to the ſcalpel.

WHEN tumors are not very large, they are commonly opened by a longitudinal inciſion with a lancet or ſcalpel, made ſo as to terminate at the moſt depending part of the ſwelling, and of ſuch a ſize as may ſeem ſufficient for giving a free diſcharge to the matter; about two thirds of the length of the tumor, is, in ſuch caſes, generally reckoned fully enough.

WHEN abſceſſes, however, are of any conſiderable extent, they are commonly laid open thro' their whole length; and when the teguments have been greatly ſtretched, it is adviſed by many, to take part of them away altogether. But, this is a practice, which ſeldom or perhaps never

ver ought to be followed, as there are ſcarce any abſceſſes ever ſo large, as to deſtroy entirely the tone of the parts; and ſo long as any contractile power remains in a part, there is ſtill hopes of its again recovering its former dimenſions.

THESE are the ſeveral modes of opening abſceſſes by the ſcalpel; there are different inconveniencies, however, found to attend all of them; and particularly, that ſo ſoon as an inciſion is made into a tumor, the whole contained matter is diſcharged ſuddenly and at once: Whereby when the collection is conſiderable, faintings and other diſagreeable ſymptoms are frequently induced; and what, in all large ſwellings eſpecially, is conſtantly attended with very bad effects, a free admiſſion of air is thereby given to a great extent of ulcerated ſurface.

THE bad effects of air on every ſpecies of ſore, is well known to every practitioner; but its pernicious influence, on a newly opened abſceſs, is often really aſtoniſhing. It firſt occaſions a total change in the nature of the matter, from perhaps a very laudable pus, to a thin ill digeſted ſanies; and afterwards brings on a quickneſs of pulſe,

pulſe, debilitating ſweats, and other ſymptoms of hectic fever, which, in a ſhort time, generally ends in the patient's death, or in the production of a real phthiſis, which at laſt terminates ſo.

This I have, in a great many inſtances, had occaſion to obſerve; and that, in ſuch caſes, it is the admiſſion of air alone, which produces all theſe bad ſymptoms, there is no reaſon, I think, to doubt. It appears, indeed, to be evidently ſo, from this circumſtance, that of a great number of patients, who have laboured under ſuch diſorders, many have remained for a very conſiderable time, with large abſceſſes fully formed, without having any one ſymptom of hectic whatever: But whenever they were larger, than a very ordinary middle ſize, I never knew a ſingle inſtance of their being opened by a large inciſion, without almoſt every ſymptom of hectic taking place; and that generally in leſs than forty-eight hours from the time of their being laid open.

How the admiſſion of air to an abſceſs, ſhould have ſuch a powerful and ſudden effect, is perhaps difficult preciſely to determine. The irrita-

tion produced by it; on a large extent of ulcerated ſurface, may probably be one reaſon; by acting as a ſtimulus, on the extremities of the different abſorbents that open into the ſore, it may, in that manner too, occaſion a larger abſorption of matter into the ſyſtem, than otherwiſe would take place; and it may likewiſe, by rendering the matter more putrid than before, render even the ſame quantity abſorbed, more active in producing the different ſymptoms of hectic.

THAT this conjecture is well founded, with reſpect to an increaſe of putreſcency being one of the principal effects of the admiſſion of air to ſores, is, from different circumſtances, at leaſt, exceedingly probable. For, in the *firſt* place, although the diſcharge from abſceſſes is commonly mild, and free from any diſagreeable fœtor, on their being newly laid open; it almoſt conſtantly becomes thin, acrid, and more fœtid in the courſe of a few dreſſings, which is a certain proof of a greater degree of putreſcency having then taken place. On this principle too is accounted for, the operation of many of the remedies uſually had recourſe to for the cure of ſores; and more eſpecially of that powerful anteſeptic

teſeptic fixed air, which by many has been ſo much extolled of late.

WE know from experiment likewiſe, that every other ſubſtance, as well as the ſerum of blood from which pus is formed, is rendered putrid, and more quickly ſo, by the admiſſion of air, than otherwiſe, in the ſame circumſtances, they probably ever would be.*

FROM theſe conſiderations, therefore, the greateſt caution appears to be neceſſary, for preventing, as much as poſſible, the admiſſion of air to the internal ſurface of every collection of matter; and this, we may remark, is very eaſily and effectually done, by opening abſceſſes, by the introduction of a ſeton or cord, inſtead of having recourſe either to cauſtic or the ſcalpel.

THIS method of diſcharging the contents of tumors, by the introduction of a cord, is attended with every advantage of that by inciſion; it, moreover, empties the ſwellings of whatever ſize they may be, not ſuddenly, but very gradually; it effectually prevents a free admiſſion of air; it

* V. Sir John Pringle's, and M. Gaber's Experiments on this ſubject. Loc. cit.

it is not commonly attended with near ſo much pain and inflammation; nor is the cicatrix occaſioned by it, ever inconvenient or unſeemly, which it frequently is, after a large inciſion.

IN the Royal Infirmary here, large abſceſſes, as well as thoſe of a ſmaller ſize, uſed formerly to be opened in the uſual manner, by extenſive inciſions; the conſequences were exactly, as already related; many of the patients being thrown into ſuch obſtinate hectic fevers, as they never recovered from; and others, though they did get better at the time, yet, by being greatly debilitated, were generally ſeized with other diſorders, from which they ſeldom entirely recovered.

SINCE the ſeton, however, came to be generally uſed in ſuch caſes, few or no ſuch diſagreeable circumſtances have occurred; many of the largeſt tumors have been opened in that manner, and when the patients were otherwiſe in good health, they always did well; and, with this additional advantage, that a cure has commonly been obtained in little more than half the time

uſually

uſually found neceſſary, when a large inciſion has been had recourſe to.

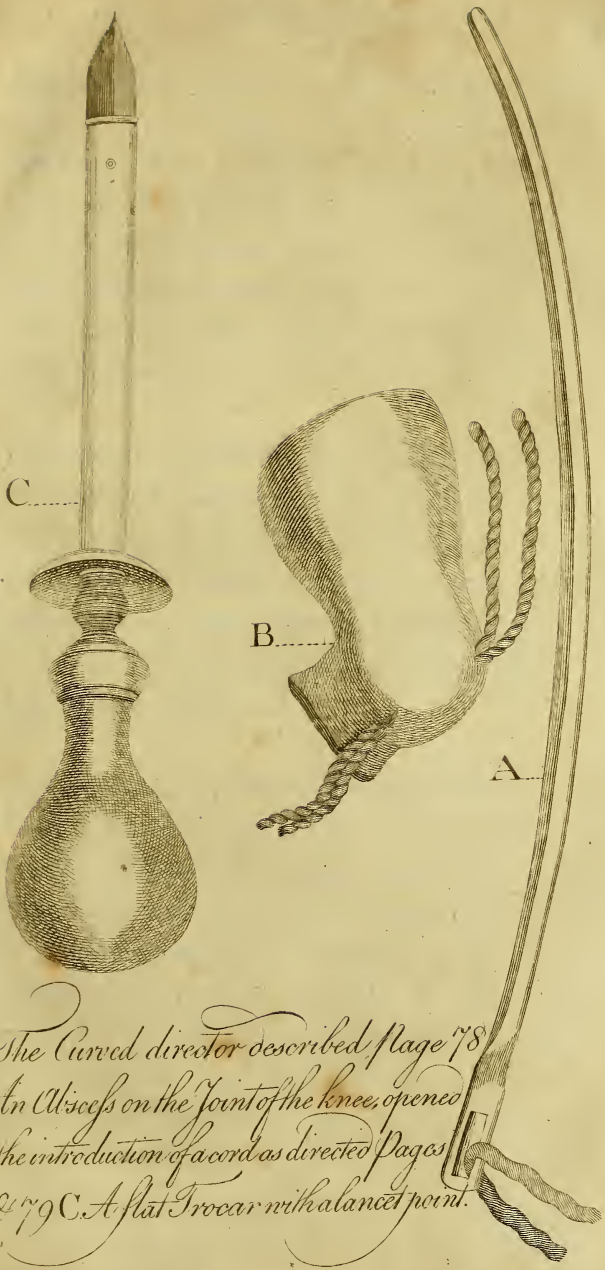
Opening abſceſſes, by the introduction of a ſeton, has been taken notice of by different authors, and, in ſmall collections of matter, has by many ſurgeons been frequently practiſed; but the practice was never probably carried to ſuch an extent, as it has been here within theſe laſt twenty years, both in the hoſpital, and, in private, by individuals. And, in juſtice to Mr James Rae, ſurgeon in this place, it muſt be acknowledged that we are chiefly indebted for it, to his recommendation; he having firſt practiſed a general uſe of ſetons in ſuch caſes, at the ſame time that he invented a ſet of inſtruments, by which they are eaſily and ſafely inſerted in almoſt every caſe of abſceſs, however deep ſeated, and among whatever parts they may run. So that there can be no objection to the practice, from the neighbourhood, either of large blood veſſels, nerves, or tendons, which otherwiſe there no doubt would be.

Several ſets of theſe inſtruments for abſceſſes of different ſizes, are kept in the Infirmary here; they

they fulfil the intention, as already obſerved, exceedingly well, and are a very ingenious contrivance. But as the curved director delineated in the plate, anſwers the purpoſe equally well, and is in itſelf fully more ſimple; it may, for that reaſon, perhaps, be ſometimes found more convenient. It is uſed in the following manner:

AN opening ſufficiently large for the cord intended to be inſerted, being made with a lancet in the ſuperior part of the abſceſs; the director, threaded with a cord of candle-wick-cotton, or of ſoft ſilk, proportioned in greatneſs to the ſize of the tumor, is then to be introduced, and its point to be puſhed downwards till it is felt externally, exactly oppoſite to the moſt depending part of the ſwelling. The director being kept firm by an aſſiſtant, an inciſion is to be made with a ſcalpel upon its under extremity, of a length ſomewhat more conſiderable than the opening firſt made by the lancet; for when this circumſtance is not attended to, and when of courſe the under orifice is made no larger than the upper, the matter is very apt to tranſude above, which always proves inconvenient to the patient; but which, in this manner is very eaſily avoided.

The



A. The Curved director described page 78

B. An Abscess on the Joint of the knee, opened by the introduction of a cord as directed Pages 78 & 79

C. A flat Trocar with a lancet point.

The director is now to be drawn downwards, with ſo much of the cord, as to leave two or three inches of it hanging out at the lower orifice. In order to cauſe the cotton run eaſily on its firſt introduction, as likewiſe at the different after-dreſſings; ſo much of it as is to be uſed at the time, ſhould be well rubbed over with any emollient ointment.

IN twenty-four hours or ſo, from its introduction, the cord may be moved, and ſo much of it drawn downwards, as to allow of all that part of it being cut off which had been uſed the preceding day; and in this manner ſo much of it is to be moved daily, ſo long as from circumſtances it may appear neceſſary.

A REGULAR and ſlow diſcharge of the matter is thus produced; the ſides of the abſceſs are thereby allowed to contract gradually; and a ſlight inflammation being kept upon their ſurfaces by the friction of the cord, they are from that circumſtance brought to unite and to adhere firmly to one another, much ſooner than they otherwiſe would do. As the diſcharge diminiſhes in quantity, ſo the ſize of the ſeton ſhould alſo be gradually

gradually leſſened; and it is eaſily done, by withdrawing a thread of the cotton, once in two days or ſo. At laſt, when there is little more matter afforded, than might naturally be expected from the preſence of the cord merely, it may be altogether taken out, and a gentle preſſure being continued upon the parts by a roller for a few days longer, a very certain and laſting cure may almoſt always be depended on.

IN the introduction of the ſeton it was expreſsly ſaid, that it ought to be made from above downwards, that is, by an opening made in the ſuperior part of the abſceſs. The reaſon for ſuch a reſtriction, is this, That when the firſt opening is made in the depending part of a ſwelling, a conſiderable quantity of matter immediately runs out, which, as it cauſes the ſides of the upper part of it to collapſe, renders it more difficult to introduce the director through the whole courſe of the abſceſs, than when done in the manner directed; when properly executed, the bottom as well as every other part of the tumor is kept diſtended to the laſt, very little of the matter eſcaping by the upper orifice. By being introduced in this way too, the quantity of cord that ſtill remains to be uſed, is kept clean and dry; which it cannot poſſibly

poſſibly be when inſerted in the contrary manner.

THESE, to ſome, may perhaps appear very trifling *minutiæ* to be ſo particularly taken notice of, but too much, it is imagined, can never be ſaid, in rendering a practice of any kind that is ſaid to be beneficial, clear and evident.

ALL that has hitherto been ſaid with reſpect to the uſe of ſetons, in caſes of abſceſs from recent inflammation, applies with equal propriety, it muſt be underſtood, to tumors of very long continuance, when the matter contained is either of a purulent nature, or of a conſiſtence not much thicker than that. In ſo much, that all encyſted tumors, of the thinner mellicerous kinds, cure equally well in this manner, as very lately formed abſceſs; ſo that the practice is by no means confined to one ſet of tumors only; and it may even probably be had recourſe to in others, in which it has not as yet been uſed.

IT anſwers particularly well in all glandular collections of matter, where admiſſion of air is attended with even worſe conſequences than in o-

ther parts. Thus, when it is thought adviſeable to open ſcrophulous ſoft ſwellings, they always heal much ſooner, and eaſier with the ſeton, than by a large inciſion. Venereal Buboes too, when fully maturated, and when the teguments are not become very thin by being long overſtretched, heal much more readily and kindly by this management than with any other.

FROM the practice anſwering ſo remarkably well in every caſe of abſceſs, it was at laſt a good many years ago, made trial of by Mr Rae in the Infirmary here, in the hydrocele, or collection of water, in the *tunica vaginalis teſtis;* and has ſince that time been frequently uſed in ſimilar caſes. I muſt acknowledge, however, that from the ſeveral inſtances I have yet ſeen of its effects in that diſorder, I am not altogether certain, whether it ought to be preferred to the ſimple inciſion or not. For, though I never knew an inſtance, when the operation was properly done, of its failing in producing a radical cure; yet, the friction of the cord upon the body of the teſtis, to which in this operation it is immediately applied, generally occaſions a very high degree of inflammation; fully more, I have often thought,

thought, than is commonly obſerved from the ſimple inciſion: Farther experience, however, is neceſſary, in order to determine a queſtion of ſuch importance.

But when, in ſuch caſes, it is reſolved to have recourſe to the ſeton, the method of introducing it, as above directed for abſceſſes, with a curved director, properly adapted in point of ſize, ſeems fully more ſimple, though, in other reſpects, nowiſe better than that lately recommended by a very ingenious author; which being through the means of a common trocar, cannot poſſibly be done, either ſo eaſily, or even, it is imagined, entirely free from danger: For inſtances have occurred, and that too, with very able Surgeons now living, where the body of the teſtis has been wounded by puncturing, in caſes of hydrocele, with that inſtrument; it being, from its round triangular form, rendered more difficult of introduction than it poſſibly could be from any other ſhape †. Whenever it is agreed upon, however, to make uſe of a trocar, either with a view to a palliative, or a radical cure, one of a lancet-

† Mr Thomas Hay, Surgeon in this place, ſome years ago invented a curved director, as here recommended, which has ſince that time, been uſed for the introduction of a cord in caſes of hydrocele, and is found to anſwer the purpoſe very conveniently.

lancet-point form, as repreſented in the plate, anſwers the purpoſe with much more eaſe than the one in common uſe. A large one of this kind was made ſome years ago, with a view to its being tried for the paracenteſis of the abdomen; and, as on that occaſion it anſwered the purpoſe exceedingly well, it has ſince been often uſed, and is always introduced with the greateſt eaſe.

SECTION IV.

Of MORTIFICATION.

§ 1. *General Remarks on Gangrene.*

THE termination of inflammation, both by Reſolution and Suppuration, having now been pretty fully treated of, we come next in order to the conſideration of *Gangrene* or *Mortification.*

THE ſeveral appearances of Gangrene having been already particularly enumerated, it is

is not now neceſſary to make a full recapitulation. Only it may be remarked, that a thorough mortification, or the laſt ſtage of gangrene, is known only by the diſeaſed part becoming totally black, by its loſing all pain and ſenſation, at the ſame time that it emits a conſiderable fœtor; at laſt too, a ſoftneſs or flaccidity *in general* takes place, together with an entire diſſolution of the different parts of which the organ is compoſed.

I HAVE ſaid only in general, for although the ſeveral appearances, as above related, do moſt frequently occur, yet there are ſome inſtances of what is called dry Gangrene, in which the parts continue totally mortified for a great length of time, without either turning very flaccid, or running into diſſolution.

SUCH caſes, however, never occur from inflammation, but happen commonly from the flow of blood to ſuch parts being put a ſtop to by compreſſion of one kind or another, as tumors, ligatures, or other ſimilar cauſes, obſtructing the principal arteries that uſed to ſupply them; which, when the ſtoppage of the circulation is complete, always

always occaſion a very ſlow, tedious, mortification; and as the parts, in ſuch inſtances, are no longer ſupplied with freſh quantities of fluids, while a conſiderable evaporation muſt ſtill be going on, ſuch a degree of humidity cannot, therefore, poſſibly occur, as does in other caſes of gangrene. So that ſpecies of the diſorder has, perhaps, with propriety enough, been termed the *Dry Gangrene.*

THERE are many other varieties of the diſeaſe enumerated by authors, as the *White Gangrene* *; in which the parts ſuppoſed mortified do not turn black; but retain nearly their former colour, &c. Whether ſuch complaints, however, can, with propriety, be denominated Gangrene or not, may probably be doubted; but, as it is chiefly that ſpecies of the diſorder, which ſucceeds to inflammation, that is now particularly to be treated of and in which no ſuch varieties are ever obſerved, it is not here neceſſary to carry the enquiry farther; and that eſpecially, as nearly the whole mode of treatment, afterwards to be pointed out, applies, with almoſt equal propriety, to every variety of the diſeaſe.

OF

* Queſnay, Traité de la Gangrene, p. 337.

Of all the inflammatory complaints to which the ſyſtem is liable, that ſpecies of the diſorder termed Eryſipelas, is obſerved moſt frequently to terminate in Gangrene; and whenever phlegmon is, in any degree, conjoined with an eryſipelatous affection, which it not unfrequently is, it ſeems thereby to have acquired the ſame tendency, by being, as already remarked, more difficult to bring to ſuppuration than the true phlegmon, and by going on more frequently to the mortified ſtate.

The beſt and moſt effectual means of preventing mortification in every caſe of inflammation, is to endeavour either to obtain its reſolution or ſuppuration; the different remedies for both which purpoſes have already been fully pointed out. But, in ſome caſes, the diſorder is far advanced, and Gangrene already begun, before the Surgeon's aſſiſtance is called in; and in others, the inflammation runs ſo high, and proceeds ſo quickly, that Gangrene occurs notwithſtanding the uſe of all the remedies that can be applied: In ſome inſtances ſo quickly, even, that the inflammatory ſtate is ſcarcely thoroughly diſcerned, till mortification appears to be begginning.

§ 2.

§ 2. *Observations on Carbuncles as a species of Gangrene.*

THIS is most remarkably the case in *Carbuncles*, what by the French are termed *Charbons;* in which the inflammation proceeds so rapidly to mortification, that there is seldom any evident tumor raised, the parts turning black, and ending in real Gangrene, often in the course of twenty four hours from the first attack.

THE quick progress usually made by this disorder, renders it the worst and perhaps the most dangerous species of inflammation; for when it occurs internally upon any of the viscera, as it sometimes does, it must probably in every instance prove fatal, as no remedies we are acquainted with, can ever prevent its progress towards the last state of mortification: Externally, indeed, when not very extensive, and not seated on any of the large blood vessels and nerves, carbuncles are frequently got the better of; that is, with the loss of the affected parts.

As

As carbuncles always appear without any evident external cauſe, they are in general moſt probably owing to a ſcorbutic or putrid ſtate of the fluids; for, when putreſcency prevails in the ſyſtem, every inflammatory affection that occurs, proceeds much more readily to the mortified ſtate, than inflammation in other circumſtances ever does.

THIS opinion with reſpect to the cauſe of carbuncles depending upon a putreſcent ſtate of the ſyſtem, is particularly confirmed, by their occurring moſt frequently as a ſymptom in peſtilential diſorders; for, althongh they are ſometimes met with even in this country, where the plague is now never known, yet the real carbuncle is far from being a common occurrence.

IN ſuch inſtances, Gangrene is very eaſily accounted for, from the prediſpoſition in the ſyſtem to putrid diſorders; but how is it produced by inflammation in other caſes, and where no ſuch diſpoſition can be ſuppoſed to take place?

§ 3. *Of the cauſes of Gangrene.*

AN increaſed action in the veſſels of a part, we have already endeavoured to eſtabliſh as the immediate or proximate cauſe of inflammation; and the ſame cauſe, it is preſumed, will, in many inſtances, account for the riſe of mortification.

ONE evident effect of an increaſed action in the veſſels, in every caſe of inflammation, is a propulſion into the ſmaller capillaries, of a greater quantity of the more groſs parts of the blood, than naturally they were intended to tranſmit: When the extravaſation of fluids which commonly enſues in conſequence of this, is not conſiderable, they are frequently reabſorbed into the courſe of the circulation, and ſo a cure is obtained by Reſolution. But when an extravaſation of the ſerous parts of the blood into the cellular membrane, takes place to a ſtill greater degree, ſuppuration is then moſt frequently the conſequence.

WHEN, again, a ſtrong exciting cauſe is applied to a conſtitution already prediſpoſed to inflammatory complaints, as a lacerated wound, for inſtance,

ſtance, in a young healthy man, the violent irritation, and conſequent increaſed action of the veſſels that enſues, occaſions the red particles of the blood to be likewiſe poured forth together with the ſerum. A collection of an extravaſated fluid being thus formed, the great degree of preternatural heat kept up by the diſorder, very readily excites in it ſome degree of fermentation; which, from the nature of the matter it has to act upon, not being able to effect a ſuppuration *, and the craſſamentum of blood, being particularly liable to run into the putrid fermentation †, mortification which is undoubtedly a very high degree of it, comes in courſe to be naturally produced.

The diſorder being, in this manner, once raiſed in a part, the progreſs, which it afterwards uſually

* Mr Gaber, when ſpeaking of his experiments upon the craſſamentum of blood, ſays, that he could never obtain genuine pus from it, and farther, adds, "vero ſimilius ergo *ſanguinem* ceteris puris prin- "cipiis admixtum, ipſum magis *fœtidum* et deterius reddere, *&c.*" Loco citato, p. 87.

† For ſome animal ſubſtances, ſuch as urine, the bile, and the craſſamentum of blood *ſoon* putrify. Sir John Pringle's experiments, Appendix, p. vi.

uſually makes, does not appear very difficult to account for. The putreſcent particles of the tumor, by inſinuating into the cellular membrane of the neighbouring ſound parts, as, in that manner, they extend the contagion, ſo they very ſoon bring theſe likewiſe to ſuffer. In this way, the mortification continues to advance, till meeting with a part, perhaps, naturally more irritable than the others, or which, by that time, has been rendered ſo, by the different remedies to be pointed out, a certain degree of new inflammation comes to be eaſily induced in conſequence of the ſtimulus, which putrid particles muſt always occaſion; which, as it renders the parts more firm and compact, makes them leſs eaſily penetrable by the putreſcent contagion, and a ſuppuration of courſe enſuing, as a conſequence of the preceding inflammation, a complete ſeparation of the diſeaſed from the ſound parts, is thereby, in general, very ſoon effected.

AT leaſt, that ſuch an inflammation, with a conſequent ſuppuration, does, in caſes of real gangrene, always happen before a ſeparation of the diſeaſed parts takes place, is well known to every practitioner; and that the cauſe aſſigned for theſe

theſe appearances, is the true one, I think, from the different circumſtances taken notice of, is at leaſt, exceedingly probable.

THUS the local ſymptoms of gangrene, are pretty certainly accounted for; and the ſinking of the pulſe, which, in extenſive mortifications, always occurs, and which is, by much the moſt remarkable change that takes place in the general ſyſtem, is a very natural conſequence of that debility, which ſeems to be a conſtant and neceſſary attendant on a putreſcent ſtate of the fluids, from whatever cauſe that may have ariſen, as is particularly demonſtrated in putrid fever, and in ſcurvy, where a languid pulſe, and general debility, are always conſidered as the moſt characteriſtic ſymptoms.

§ 4. *Of the Prognoſis in Gangrene.*

IN every caſe of gangrene, the prognoſis ſhould, at firſt, be exceedingly doubtful; for, even in the ſlighteſt affections of that nature, the ſyſtem, from the contagion it receives by the abſorption of the putrid matter, is, in ſome inſtances, ſo much affected, that the patients are ſuddenly

ſuddenly carried off, without having been previouſly in any evident or apparent danger.

IN ſuch caſes, however, as ſucceed to inflammation from an external cauſe, where the gangrene is neither very deep nor extenſive, and does not ſeem to ſpread, the prognoſtic ſhould then to be ſure be much more favourable than in thoſe that ſuddenly ariſe from an internal cauſe, where the mortification runs deep, and more eſpecially when it is ſtill continuing to advance; in which circumſtance, the greateſt danger is always to be apprehended. Indeed, no perſon whatever, with any conſiderable mortification, even from an external cauſe, can be ſaid to be free from riſk, till the diſeaſed parts are not only ſeparated, but even entirely caſt off from the ſound. The poiſon of putrid miaſmata being of ſuch a penetrating deſtructive nature, that many inſtances have occurred of patients being very quickly carried off, ſeemingly from that circumſtance alone, long after the mortification had ceaſed to advance farther.

§ 5.

§ 5. *Of the neceſſary Remedies in Gangrene.*

IN the treatment of Gangrene, when no blood-letting or other evacuation has been preſcribed during the preceding inflammatory ſtate of the diſorder; and when the general ſymptoms of inflammation, particularly a quick, full, or hard pulſe, ſtill continue violent; and eſpecially when the patient is young and plethoric, it then becomes abſolutely neceſſary, even although mortification may have commenced, to empty the veſſels a little by one general blood-letting. Which, by moderating the fever, and abating the univerſal heat, proves often a great means of preventing the diſorder from proceeding farther; and, in this view, blood-letting, in ſuch caſes, may, in reality, be conſidered as an antiſeptic, and does often, indeed, in that particular ſituation of mortification, prove more powerfully ſo than all the different articles in general enumerated as ſuch.

UPON the ſame principles with blood-letting, gentle laxatives, and a free uſe of acidulated cooling drink, alſo become neceſſary. But, as in the farther progreſs and continuance of mortification,

cation, the patient is very apt to ſink, and the pulſe to turn languid, every evacuation, eſpecially of blood, ſhould be ſparingly adminiſtred, and no more ever admitted of than may ſeem merely neceſſary for *moderating ſuch ſymptoms* as at the time appear too violent.

WHEN again, as is moſt frequently the caſe before the diſorder has made any great progreſs, the patient is much reduced, either by ſevere evacuations, or merely by the effects of the complaint, when the pulſe is low, and the other ſymptoms of fever not conſiderable, in theſe circumſtances a quite contrary treatment becomes neceſſary; the principal indication, then, being to prevent the ſyſtem from ſinking too much, by a proper uſe of cordials, and eſpecially by thoſe of the tonic kind, while, by the ſame means, we enable it to free itſelf from, or to caſt off the mortified parts. For, as already obſerved, the ſeparation of gangrenous, from healthy ſound parts, being always effected by the intervention of inflammation, it ſhould be our chief care to aſſiſt nature as much as poſſible, in exciting in the ſyſtem, by every proper means, that diſpoſition which, from experience, we know to be moſt

moſt favourable for the production of inflammation; which, when ſpeaking of the general predisposing cauſes to inflammatory complaints, we have endeavoured to ſhew, to be a full plethoric ſtate of the veſſels, which, at the ſame time, is generally conjoined with a more invigorated tone of the veſſels themſelves.

IT may, perhaps, be imagined, that this indication is, in ſome meaſure, contradictory to what was lately obſerved with reſpect to the propriety of blood-letting in ſome caſes of gangrene; when properly conſidered, however, it will by no means appear to be ſo. For we well know, that in every diſorder to which the ſyſtem is liable, an over-doſe of the moſt effectual remedy, will often prove juſt as detrimental as a medicine of the moſt oppoſite tendency; and, in the ſame manner, tho' a certain degree of inflammation is, perhaps, abſolutely neceſſary for the cure of every gangrene, yet, in a very high degree, it becomes always exceedingly hurtful.

WITH a view to fulfil the intention of this indication, a good nouriſhing diet becomes neceſſary, with ſuch a proportion of generous wine as

the patient's ſtrength, and ſymptoms of the diſorder may ſeem to require.

BY a due attention to this circumſtance of regimen, particularly by a proper allowance of wine, much more real advantage is commonly obtained than ever occurs from the uſe of the whole tribe of ſtimulating warm cordials. When, however, the patient is much reduced, and very languid, ſome of theſe, ſuch as the volatile *alkali*, and *confectio cardiaca*, may, at the ſame time, and in ſuch quantities, be preſcribed, as the patient's immediate ſituation appears to render neceſſary.

BUT of all the medicines hitherto uſed in mortification, there is none proves ſo certainly efficacious as the *Cortex Peruvianus*, which has often a very evident and powerful influence in putting a ſtop to the diſorder. As it is a very powerful tonic remedy, it may probably act by invigorating the general ſyſtem, and ſo, by rendering it more ſuſceptible of that inflammatory tendency, which we have ſhewn to be ſo neceſſary for effecting a ſeparation of mortified parts, it may, in that manner, enable it to free itſelf from them. It may likewiſe, perhaps, in ſome inſtances, act

as

as an antiſeptic in the way of correcting putrefaction, though, in the former mode of operating, its effects, it is apprehended, are generally much more conſiderable than in the latter.

In whatever manner the bark operates, however, it can in no caſe of mortification be ever, with propriety, omitted, excepting in the firſt ſtage of the diſorder, while ſeveral of the inflammatory ſymptoms yet remain violent; but, ſo ſoon as theſe are tolerably abated, it may always, both with ſafety and advantage, be had recourſe to.

The beſt rule with reſpect to the quantity of the medicine to be exibited, is to give it always in as large doſes, and theſe to be as frequently repeated as the ſtomach can bear. It is a great inconvenience, however, that attends almoſt every caſe of gangrene, that the ſtomach can ſeldom bear large enough quantities of the bark in ſubſtance, which is always the beſt mode of uſing it, but particularly in this diſorder, when none of the finer preparations of the medicine are ever ſo much to be depended on. Of all the different forms in uſe for giving the bark, I have generally

nerally found it fit eafieft on the ftomach when conjoined with fome of the fpiritous waters; and to the ufe of which, in fuch cafes as bark itfelf is proper in, there can never be any objection. The following formula is far from being difagreeable, and I have known it anfwer with patients whofe ftomachs rejected every other:

℞. Aq. alexiter. fimp.
Cinnamon. fort. *aa* unc. iii.
Aromatic. unc. ii.
Pulv. cort. Peruv. fubtil. unc. fs. mifce; coch. ii.
Omni femihora fumendis, agitata phiala.

IN this manner a drachm of the bark comes to be taken every hour, which, in general, in lefs than twenty-four hours, has a confiderable influence in producing a change on the diforder. A great deal depends upon the medicine being in a fine powder, as patients often bear confiderable quantities of it in that ftate, when they reject even very fmall dofes of a coarfe powder.

TOGETHER with the bark, the vitriolic acid is frequently had recourfe to with advantage, and the

the beſt form of uſing it, is by acidulating all the patient's drink with elixir of vitriol.

THESE are almoſt the only internal remedies to be depended on in caſes of gangrene; many others indeed have been recommended, but all the advantages to be obtained from any of them, are with more certainty to be got, it is imagined, from ſome or all of thoſe already mentioned.

IN the way of external application, a variety of remedies have been pointed out, and particularly thoſe of the antiſeptic kind; ſuch as all the warm gums, and balſams, ardent ſpirits and even alcahol; and to admit of their nearer application to the ſound parts, with a view to the preſervation of theſe from putrefaction, deep ſcarifications through the diſeaſed and into the ſound parts have been generally recommended.

BUT although ſuch articles may be of uſe in preſerving *dead* animal ſubſtances from corruption, yet that they will always prove ſerviceable, in the ſame manner in living bodies, is probably very much to be doubted. And it is even apprehended, by the ſtrong irritation they always occaſion

caſion when applied to a living fibre, that, in ſuch caſes as the preſent, they may rather do miſchief, it being only, as was already obſerved, a very ſlight degree of inflammation that is required. The inciſions too, when carried into the ſound parts, with a view to facilitate the operation of ſuch remedies, may likewiſe do harm, not only from the riſk of wounding the blood veſſels, nerves, and tendons that lie in the way; but alſo, by allowing a free and farther entrance of the putreſcent fluids into the parts not yet affected: And unleſs they are carried ſo deep as freely to reach the ſound parts, applications of the antiſeptic kind, can never have any effect in anſwering the purpoſe for which they were intended.

FOR theſe reaſons, and from never having obſerved any advantages to accrue from ſcarifications in mortification, I have long thought, that they might be entirely laid aſide *. Theriac was

* Although I was convinced from experience of what is here advanced againſt the uſe of ſcarifications, as well as of the impropriety and inefficacy of very warm ſtimulating applications in caſes of mortification; it was not without diffidence that I firſt ventured to aſſert it, the opinion at that time being, in this place at leaſt, in a great meaſure new. I am now happy to find, however, in a late publica-

tion

was, in former times, and ſtill is, with ſome practitioners, a very common application in every caſe of gangrene; but from any opportunities I have had of ſeeing it uſed, I cannot ſay that it ever ſeemed to produce any evident good effects.

ALL the advantages commonly obſerved from the great variety of applications recommended for gangrene, are obtained with more eaſe, and generally too with more certainty, from the uſe of any gentle ſtimulating embrocation; which, by exciting a ſlight irritation upon the ſurface, and eſpecially when aſſiſted by a free uſe of the bark, as already directed, at laſt commonly produces ſuch a degree of inflammation, as is wiſhed for. With this view, I have frequently known a weak ſolution of *ſal ammoniac* in vinegar and water, anſwer exceedingly well; a drachm of the ſalt to two ounces of vinegar, and ſix of water, form a mixture of a very proper ſtrength for

tion, the ſame practice recommended from the beſt authority. *Vide* Chirurgical Obſervations by Percival Pott. F. R. S. &c.

In the ſame publication is given a particular deſcription of a ſpecies of mortification incident to the toes and feet, in which Peruvian bark has little or no influence, and in which opium given in large doſes frequently repeated, proves a very effectual remedy.

for every purpoſe of this kind; but the degree of ſtimulus can be eaſily either increaſed or diminiſhed, according to circumſtances, by uſing a larger or ſmaller proportion of the ſalt.

ALTHOUGH, for the reaſons formerly advanced, inciſions may not, in general, be proper, yet, in ſuch caſes, where the mortification runs very deep, it is ſometimes of ſervice to make ſcarifications into the diſeaſed parts, ſo as to remove part of them; which, by taking off a conſiderable load, perhaps, of putrid dead fleſh, not only leſſens the fœtor, which, in ſuch caſes, is always conſiderable, but often renders it more eaſy for the ſound parts to free themſelves from the remainder: When, with this view, however, inciſions are had recourſe to, care ſhould always be taken, that they be not carried the length of the ſound parts.

WHENEVER, either by the means recommended, or by the effects of a natural exertion of the ſyſtem, a ſlight inflammation appears between the diſeaſed and ſound parts, we may in general, with tolerable certainty, expect, that, in due time, a thorough ſeparation will take place; and when

when a full ſuppuration is once fairly eſtabliſhed, there can then be little doubt, but that the mortified parts will be very ſoon and eaſily removed.

A ſeparation being altogether effected, the remaining ſore being then to be conſidered merely as a ſimple purulent ulcer, may be treated in the ſame manner as ſuch ſores generally are, with very ſlight eaſy dreſſings, at the ſame time that proper attention muſt always be paid to the ſupport of the general ſyſtem, by the continuance of a nouriſhing diet, the bark, and ſuch quantities of wine as may ſeem neceſſary.

ALTHOUGH, however, ſuch ulcers as remain after gangrenous affections that have not been very extenſive, may, in general, be healed in the manner now mentioned; yet, in mortifications ſeated on the extremities, and that have penetrated to the bones, it ſometimes happens that the whole ſurrounding ſoft parts come to be deſtroyed, ſo that amputation of the member is thereby rendered neceſſary. Amputation, however, ſhould never be had recourſe to, till a full and thorough ſeparation of the mortified parts has taken place; for it is now, in every caſe of

gangrene, from undoubted experience, an eſtabliſhed maxim in ſurgery, that though the parts immediately contiguous to thoſe *evidently* diſeaſed, may outwardly appear ſound, yet there can be no certainty of thoſe even directly below remaining ſo, till a full ſtop, or even till a complete ſeparation of the mortification has been produced; ſo, till that has evidently taken place, it is, in ſuch caſes, a general rule never to amputate a member, there being no other ſecurity for the diſorder not returning, and that immediately too upon the remaining ſtump.

IT muſt be obſerved, however, that ſo ſoon as an intire ſeparation of the gangrene has occurred, no time ſhould be unneceſſarily loſt in having recourſe to the operation; for, ſo long as any of the corrupted parts remain in contact with the ſound, the ſyſtem muſt ſtill be ſuffering conſiderably, by the conſtant abſorption of putreſcent particles, that ſo long will undoubtedly take place.

CHI-

CHIRURGICAL ESSAYS.

PART II.

On the Theory and Treatment of ULCERS.

SECTION I.

Observations on Ulcers in general.

BY different authors very different definitions have been given of the term *Ulcer:* But what, in general, ſeems to be underſtood by it, is a ſolution of continuity in any of the ſofter parts of the body, diſcharging either pus, ſanies, or any other vitiated matter; and that, whether the complaint may have originally proceeded from an internal or an external cauſe.

MANY

MANY writers, indeed, have confined the term to ſuch ſores as are the conſequence of ſome internal diſorder of the ſyſtem: But in this they have certainly erred; for even the moſt ſimple wound, not in the leaſt connected with any other diſeaſe, if it does not heal by what is called the firſt intention, without the formation of matter, muſt, in its progreſs towards a cure, always end in an ulcer.

ALTHOUGH, in compliance with cuſtom, I have, in the definition, confined the ſeats of ulcers to the ſoft parts only, yet that ulcers of the bones do likewiſe occur, is certain: Thus every ſpecies of caries, with loſs of ſubſtance, may, with propriety, be termed an Ulcer, and is ſo in reality, both in its appearances and effects.

BUT, in order to prevent any ſort of confuſion, by the introduction of more diſtinctions than are abſolutely neceſſary, I mean to conſider caries as an accidental ſymptom of ulcers, and to ſpeak of it under the general denomination of *Carious Ulcer*.

ULCERS

ULCERS have been commonly diſtinguiſhed by different appellations, according to ſome particular circumſtance attending them; and different methods of cure have accordingly been pointed out for each: And had theſe been taken from characteriſtics ſufficiently diſtinct, and of any real conſequence, either in the theory or treatment of the different diſorders, they would, no doubt, have been material, and ought to be retained. But as it is evident that many of them have been formed from circumſtances, either not very obvious, or from ſuch as are merely accidental, and that do not, therefore, afford any real diſtinction, to adhere to theſe can never be attended with the leaſt advantage, and may even, it is preſumed, frequently do miſchief, by leading to a more complicated practice, when a much more ſimple treatment might probably anſwer the purpoſe.

THE different circumſtances that ulcers have received their denominations from, are,

1. FROM the general appearances of the ſolids in the parts diſeaſed; as the Callous, Fungous, Fiſtulous, *&c.*

2. FROM

2. FROM the nature of the matter discharged; as the Ichorous, Sordid, and Purulent; from their discharging a thin ichor, a more viscid glutinous kind of matter termed Sordes, and purulent matter.

3. FROM their standing, as the Recent, and Habitual.

4. FROM the attendant symptoms being mild or violent, they are denominated Benign or Malignant; and,

5th, THEY have been termed Venereal, Scorbutic, or Scrophulous, according as they have been supposed to be connected with one or other of these diseases.

THOUGH it may be proper for practitioners to be acquainted with these and other terms that have been used, in order more accurately to understand the meaning of authors, and to explain to one another the appearances of diseases, yet it is exceedingly obvious, that many of the distinctions have been taken from circumstances quite too trivial to have any real influence on the disorders;

orders; and which, consequently, can have no other effect than to embarrass and perplex beginners.

§ 1. *Of the Arrangement of Ulcers.*

THE following arrangement of ulcers, at the same time that it appears exceedingly simple and natural, comprehends every species of the complaint that can occur; and, by attending to it, their treatment is commonly rendered much more certain than in general it is found to be.

ULCERS then may be divided into two general classes; in the first I would comprehend all such as are merely local, and that do not depend upon any disorder of the system.

IN the second class are included all such ulcers as are the consequence of, or that are connected with any disorder of the constitution.

THE importance of such a classification appears evident from the very great difference in the treatment, which undoubtedly should take place, between ulcers that are only topical affections, and such as are connected with any disorder

der of the ſyſtem. It is frequently, indeed, from want of due attention to a diſtinction of this nature, that the treatment of ulcers is rendered ſo tedious and uncertain as they very often are. For, by forming a diagnoſis too haſtily, and treating an ulcer that is merely a topical affection, with remedies directed to ſome diſorder of the general ſyſtem, many are, of conſequence, forced to undergo very unneceſſary courſes of medicine; and have thereby their conſtitutions irreparably hurt.

A CONTRARY error again, not unfrequently happens, that is ſometimes attended with very diſagreeable conſequences, in treating as ſimple local affections, ſuch ulcers as are certainly owing to ſome general diſorder of the habit; and which it is, therefore, in vain to expect to cure by topical remedies only, unleſs the diſeaſe of the conſtitution is at the ſame time attended to. Sometimes too, an ulcer is treated as a diſorder of the conſtitution, but by miſtaking the nature of the complaint, which of courſe muſt occaſion a miſapplication of remedies, the cure of the ſore is thereby not only greatly retarded, but the ſyſtem in

in other reſpects often brought to ſuffer very materially.

THUS, an ulcer connected with a ſcorbutic habit of body, is not unfrequently miſtaken for, and treated as a leprous, or venereal affection; a circumſtance which undoubtedly leads to a kind of practice, that muſt frequently be attended with diſagreeable conſequences.

THE only cauſe that can occur, to occaſion ſuch miſtakes in practice, is the want of a proper ſet of diagnoſtic ſymptoms for each ſpecies of ulcer. This, in the enſuing ſections, I have in ſome meaſure endeavoured to remedy; by enumerating as clearly and concifely as poſſible, the different characteriſtic ſymptoms of each; and as the ſeveral ſpecies taken notice of, though they contain every material diſtinction that can in the leaſt affect practice, yet as they are not near ſo numerous as thoſe commonly mentioned by authors, the ſeveral means of diſtinction pointed out, will, it is hoped, be found fully ſufficient for characteriſing all the different ſpecies.

BEFORE going on to the particular conſideration of the different ſpecies of the diſorder, it will not be improper, in the firſt place, to make a few obſervations upon ulcers in general; and firſt with reſpect to their cauſes.

§ 2. *Of the cauſes of Ulcers in general.*

THE cauſes which, in different circumſtances, may give occaſion to ulcers are exceedingly various; but in general they are found on examination, to ariſe from one or other of the following nature:

1*ſt*, FROM ſuch as may be termed occaſional or exciting cauſes; of which kinds are, wounds in general, bruiſes ending in ſuppuration, burns, and inflammation from whatever cauſe it may have ariſen, when it terminates either in gangrene or ſuppuration.

2. FROM ſuch as with propriety may be termed prediſpoſing cauſes; of which kind are conſidered, all diſorders of the ſyſtem in general, attended with determinations to, or affections of particular parts. Such as fevers of all kinds that terminate

minate in what are called critical abſceſſes; alſo lues venerea, ſcrophula, and ſcurvy.

3. ULCERS may proceed from a combination of the two foregoing cauſes: Thus a ſlight ſcratch, or excoriation, that in a ſound conſtitution would have healed without any trouble, in a habit tainted with any of the above-mentioned diſorders, will frequently produce a very diſagreeable and tedious ulcer.

§ 3. *Of the prognoſis of Ulcers in general.*

THE cauſes of ulcers being ſo very various both in their natures and effects, the prognoſis to be given in all ſuch complaints muſt, it is evident, be no leſs ſo.

1. IT muſt depend upon the nature of the different exciting cauſes that may have given riſe to the diſorder.

2. UPON the ſituation of the ſores; and,

3. ON the time of life and habit of body of the patient at the time.

WITH

WITH reſpect to the firſt of theſe, it is evident, that the occaſional cauſe muſt have a very conſiderable influence on the nature of the complaint. Thus an ulcer proceeding from a ſimple wound, inflicted with a clean cutting inſtrument, will *cæteris paribus* always heal more eaſily, than one that has been the conſequence, either of a ſevere bruiſe, or of a wound from a foul ragged inſtrument.

IT is likewiſe found, that punctured wounds are much more difficult of cure, than ſuch as have large free openings; and this again may be owing to two different reaſons.

1. To the want of a free exit to the matter, which in punctured wounds, is very apt to inſinuate itſelf between the common teguments and muſcles, and even between the interſtices of the different muſcles themſelves; a circumſtance that frequently lays the foundation of very troubleſome ſinuſes.

2. THE ſymptoms of inflammation and pain, that ſucceed to wounds from punctures, are always much more troubleſome than from ſuch wherein

wherein the parts have been freely and extenſively divided; for it is found by experience, that the irritation occaſioned by the partial diviſion, either of a nerve or of a tendon, proves always much more conſiderable than when the parts have been thoroughly cut in two: And hence has ariſen the practice of enlarging all ſuch wounds; which often carries off the pain and inflammatory ſymptoms more effectually, than all the applications and remedies that in ſuch caſes are generally recommended.

Secondly, THE cure of ulcers, it was obſerved, is conſiderably influenced by their ſituation, and that in two different reſpects.

1. WITH reſpect to the nature and organization of the parts on which they are ſeated; and,

2. As to their ſituation on the trunk of the body, or on the upper or lower extremities.

THUS it was long ago remarked, and has ſince been confirmed by experience, that ulcers in the ſoft fleſhy parts heal much more eaſily, than when the

the tendons, apaneuroſes of muſcles, glands, perioſteum or bones, are affected.

THE pain occaſioned by ſores in the ſoft muſcular parts is not ſo conſiderable, the diſcharge is generally better conditioned, and the cure commonly advances more quickly than when any of the other parts are the ſeats of the diſorder: And, on the other hand, whether ulcers are ſeated in the cellular membrane, in the tendons, perioſteum or bones, their cure is always obſerved to go on much more eaſily, when ſeated in the trunk of the body, than on any of the extremities; and of theſe, again, the legs and feet are found by every practitioner to be the moſt troubleſome ſituation for ſores of every kind.

THE depending ſituation of the latter, ſeems to be the principal cauſe of ſuch a difference; for the fluids having in them to proceed in a direction quite contrary to their own gravity, and that too at ſuch a diſtance from the heart, where its influence cannot be conſiderable, whenever any of the parts happen to loſe their tone, or by any accident ſuffer in their arrangement, ſwellings, eſpecially thoſe of the ſerous kinds, very naturally

naturally occur. And, when such swellings do arise in the neighbourhood of ulcers, by occasioning too great an afflux of matter to the sores, the discharge at last becomes vitiated in its quality likewise, and so the cure is protracted, till the parts, by rest and proper management, have again recovered their natural tone.

IT is from this circumstance chiefly, that a a great part of the cure, in ulcers of the legs, is made to consist in rest, and in keeping the limb in an horizontal posture. One great advantage too of the laced stocking, in such cases, consists in its tendency to prevent these kinds of swellings: This will hereafter, however, be more particularly taken notice of.

THE situation of ulcers likewise, with respect to the neighbourhood of large blood-vessels and nerves, from the danger of these at last becoming affected, must naturally have a considerable influence on the prognosis; as ought also their being seated upon, or very near to any of the large joints, or there being any risk from their situation of the matter penetrating into either of the cavities of the chest or abdomen.

IT

IT was, in the *third* place, obſerved, that the prognoſis, in every caſe of ulcer, ſhould be greatly influenced by the age and habit of the patient.

THUS, in young healthy people, the ſecretions of all kinds are much better proportioned, both in quantity and quality, than in the old and unhealthy, in whom the ſecreting organs are ſeldom capable of performing rightly their different functions: And, as the different diſcharges from ulcers are to be conſidered entirely as ſecretions from the general maſs of fluids, and their being of a good or of a bad quality, depending of courſe ſo much on a healthy ſtate of the ſolids, it cannot, therefore, appear ſurpriſing, their being ſo much influenced by the general health of the patient.

THE cure of ulcers depending, therefore, upon ſuch a variety of circumſtances, a juſt prognoſis, it is evident, can only be obtained from a due attention to all of them.

§ 4.

§ 4. *The Cure of every Ulcer may, with certain Cautions, be safely attempted.*

WITH respect to the *treatment* of ulcers, the first circumstance to be determined, is the propriety of attempting a cure or not. For, when ulcers have been of very long continuance, or appear to have had any effect either in carrying off, or in preventing any disorder the constitution may have formerly been liable to, it has always been considered as dangerous to attempt their cure: And, accordingly, almost every author that has wrote upon the subject, has expressly determined against it, as being a hazardous, and even a dangerous practice.

SUCH ulcers as have afforded a copious discharge, and have been of very long standing, it would no doubt be exceedingly imprudent all at once to heal up, as the system might very probably suffer from the sudden retention of a considerable quantity of fluids, which it had been accustomed for a long while to throw off, by means of such drains. Many cases, indeed, have ended fatally upon such ulcers drying up suddenly,

ly, either of their own accord, or by the imprudent uſe of aſtringent applications.

ON the other hand, however, the inconvenience of a conſtant running ſore, and that too for life, and perhaps in a very diſagreeable ſituation, is ſuch as none but very old or inactive people can be ſuppoſed to ſubmit to; and, at the ſame time, is a circumſtance that makes it a very deſirable object, the diſcovery of ſuch a courſe as may render it ſafe for patients to get free of ſuch troubleſome diſorders.

THIS, with a very little caution, may be always accompliſhed, and that too with the greateſt ſafety; the only requiſite precaution before attempting the cure of ſuch habitual ulcers, being the introduction of ſome other drain, through the intervention either of a pea-iſſue or of a cord; the former of which is managed with the greateſt eaſe, and by increaſing or diminiſhing the ſize and number of peas made uſe of, the quantity of matter may be enlarged or diminiſhed at pleaſure.

§ 5.

§ 5. *Of the Effects of Iſſues in the cure of Ulcers.*

AN iſſue of this kind being introduced, and having come to diſcharge properly, and in quantity nearly equal to what the ulcer afforded, the cure of the latter may be then carried on with the greateſt freedom; and if the ſore has not been of very long ſtanding, the ſize of the iſſue may be gradually leſſened, till it is brought to conſiſt of a ſingle pea or ſo only, which can be kept conſtantly open with very little trouble.

BUT when, on the contrary, the ulcer has been of very long continuance, and eſpecially if it ſeems to have been inſtrumental in preventing any other formidable complaint, in that caſe the iſſue ſhould undoubtedly be continued of the ſame ſize for life; but even this may be done with no great inconvenience, at leaſt in compariſon with the trouble attending a large ulcer.

THIS practice might, I think, from reaſoning alone, be conſidered at leaſt as ſafe. For, if a drain equally copious is firſt introduced, and afterwards kept running, healing the ulcer for which it was ſubſtituted, however old it may have been, cannot, in theſe circumſtances, one would imagine, make any ſort of difference to the

the conſtitution. And, in fact, I can, from experience, certainly ſay, that, in many ſuch caſes, the practice has been had recourſe to, and I never knew an inſtance of its producing any inconvenience.

THE objections that have been made to the practice here recommended, are,

1. THAT an iſſue to be continued for life, is almoſt as troubleſome and diſagreeable in its management as an ulcer. And,

2. THAT nature having been for a long time accuſtomed to the diſcharge of a particular kind of morbid matter afforded by the ulcer, we ought not, therefore, by innovations, to run any riſk in diverting her ſtated and uſual operations.

THE firſt of theſe arguments is very eaſily, and has already, indeed, been in ſome meaſure anſwered; for it cannot be readily admitted, that a ſimple iſſue, the moſt convenient ſituation for which can be choſen, will prove ſo troubleſome as a large ulcer, and that probably in a very

very inconvenient ſituation: Of this, indeed, we have evident demonſtration, from daily experience, there being no complaint more perplexing to patients than extenſive ulcers, eſpecially when the diſcharge is thin and acrid, as it very often is.

§ 6. *The effects of Ulcers on the Conſtitution depend more on the Quantity than on the Quality of the Matter diſcharged.*

THE other objection alledged againſt the practice of healing old ulcers, is, as was already obſerved, the ſuppoſed danger and riſk to the conſtitution, from the retention of a particular kind of morbid matter, which by their means it had been accuſtomed to get free of.

BY the ſupporters of that objection it is ſaid too, that although we may, by means of an iſſue, occaſion a drain equal in *quantity* to the matter afforded by an ulcer, yet its being different in *quality* muſt make a very great change to the ſyſtem.

AND it muſt be acknowledged, that we do almoſt univerſally obſerve the greateſt difference between

between the matter of an iſſue, and that diſcharged from an ulcer; from the latter it being frequently thin, ſharp, and acrid, whereas a mild bland pus is the moſt common diſcharge from iſſues.

THE foregoing argument, at firſt ſight, appears very concluſive, and has probably, with many, been the principal reaſon for rejecting the practice in queſtion; upon due conſideration, however, it will not, it is preſumed, be found to be of ſo much conſequence; and, that it is more owing to the quantity diſcharged by ulcers, than to the quality of the matter, that they prove uſeful to the conſtitution or otherwiſe, will, with very little reflection, be rendered exceedingly evident.

THUS it is obſerved, that the ſtoppage of even a pea iſſue, though it may never have diſcharged any thing farther than the mildeſt and moſt ſimple pus, if it has been of long continuance, proves equally dangerous to the conſtitution as the ſtoppage of an ulcer that has diſcharged nothing but matter of the moſt acrid kind; a circumſtance which could by no means be the caſe,

if

if the common opinion was well founded, of its being the *nature of the diſcharge* only, to which the effects of drying up old ſores is to be attributed.

AND, that the quantity merely of matter diſcharged, ſhould, independent of every other circumſtance, have a conſiderable influence on the ſyſtem, cannot appear in the leaſt ſurpriſing, when we reflect on the very conſiderable proportion of fluids requiſite for the ſupply of even a middle ſized iſſue with pus. For, independent of the quantity that appears, and is diſcharged at the different dreſſings, a large exhalation and abſorption likewiſe, of the more thin ſerous parts, is conſtantly and at all times going on; and which circumſtance alone accounts for the debilitating effects frequently obſerved from iſſues, that, in point of ſize, appear very inconſiderable *.

WERE

* Upon this ſubject Sir John Pringle remarks: "As near as I "could gueſs an ounce of ſerum, upon ſtanding ſome days, did not "furniſh more of this matter, *viz.* Pus, than what might be produced "by the daily running of a pea iſſue, or of a ſeton." Vid. Exper. "xlv. Appendix to Diſeaſes of the Army.

WERE we, indeed, certain that ſuch acrid putrid matters, as are frequently diſcharged by ulcers, previouſly ſubſiſted in the maſs of blood, and that ſuch ſores ſerved merely as drains for theſe, this would, no doubt, prove a very weighty argument; but, as it is probable, and, indeed, I may ſay certain, that it is by the ulcer only that ſuch kinds of matter are formed, and that none of them previouſly ſubſiſted in the blood, for this reaſon, therefore, the argument cannot be allowed to be of any conſequence.

VERY little conſideration, indeed, will make it appear, that no ſuch kinds of matter as is frequently obſerved to flow from ulcers, ever ſubſiſted in the blood. No analyſis of the blood has ever been able to ſhew the exiſtence of ſuch acrid matters; nor is it eaſy to ſuppoſe life to continue in a frame ſo delicate as the human, with its veſſels, which are ſo tender and irritable, filled with any ſort of fluid, in its nature much more acrid than what, in general, the blood, in a ſtate of health, is obſerved to be. Whereas it is well known, that the diſcharge from ſome kinds of ulcers, eſpecially from thoſe generally termed *Phagadenic*, is often ſo acrid, as not only

to

to excoriate the ſurrounding parts, but even ſometimes to render it dangerous for a Surgeon to apply the neceſſary dreſſings.

IN ſome caſes of ſcurvy, indeed, a conſiderable degree of putreſcency, of even the blood itſelf, does, no doubt, frequently take place; but it is not in ſuch ulcers as occur in that diſeaſe, that ſuch very acrid corroſive humours, as we are now ſpeaking of, are ever obſerved; the phagadenic ulcer, of different authors, being a very different diſorder from the true putrid ulcer, as deſcribed by Lind and other writers on ſcurvy.

BESIDES, though it was really proved that theſe kinds of matter actually did ſubſiſt in the blood, and that too in their different completely formed ſtates, how is it poſſible that, by means of ſuch ulcers, or any other drains, the morbid fluids chiefly ſhould be evacuated, and ſuch only left behind as are mild and innoxious? A circumſtance, however improbable, yet has always been aſſerted by the ſupporters of the opinion in queſtion.

THE inſufficiency of the theory appearing ſo remarkable, ſhould of itſelf make it be rejected, though we could not even introduce a more ſatisfactory opinion in its place. But, as we can very clearly explain and account for every appearance and alteration in the diſcharge of ulcers, by ſuppoſing them to depend on ſome peculiarity in the ſolids or ſecretory organs connected with the ulcer, we are hence more eaſily induced to reject every other ſuppoſition.

THE general ſeat of ulcers is in the cellular membrane, now it is well known, that naturally there is ſecreted into the cells of that membrane, as there is into every cavity of the body, a thin tranſparent ſerum intended to keep theſe moiſt, and to facilitate the actions of the different muſcles. It is this chiefly, with a greater proportion of the coagulable part of the blood, which, with a due degree of heat, as was elſewhere obſerved, forms that matter which we call Pus; and which we ſuppoſe, and indeed find, to be the natural diſcharge of ulcers in a ſound healthy ſtate of the body; and it is ſome change upon the nature of this fluid, which occaſions the varieties in the diſcharges

charges from ulcers, and in the ſame ulcer at different times.

SUCH changes, though they are no doubt, in ſome degree influenced by different circumſtances, as will hereafter be obſerved, yet in a great meaſure, they muſt depend upon ſome particular affection of the organs that ſeparate ſuch fluids from the blood; for frequently in the courſe of a very few hours, we can, by means of an external topical application merely, change the appearance entirely of the matter of an ulcer, which in that manner could never in any caſe be done, if the change produced depended on an alteration effected on the general maſs of blood.

ACCORDING to the nature of the exciting and other cauſes of ulcers, it is not unreaſonable to ſuppoſe, that very conſiderable differences will occur upon the ſecreting organs to which they are applied. Thus, it may readily be preſumed, that a burn will in this reſpect produce a very different effect from a cut, a bruiſe from a puncture, *&c.* And that, likewiſe, according to the particular ſtate of the patient's health at the time, very

very conſiderable differences will in the ſame manner take place.

IN what manner theſe different cauſes operate, in producing ſuch oppoſite effects upon the ſolids or ſecreting veſſels of ulcers, is not, perhaps, to be ſo eaſily explained, nor to ſay preciſely what the particular changes they induce upon ſuch parts really are. But, as all the cauſes of ulcers that we are acquainted with, are of an irritating ſtimulating nature, it is probable they all act by producing ſome inflammatory affection on the extremities of ſuch veſſels as empty into the ſores; and that the nature of the diſcharge, will in every reſpect depend much upon the degree of inflammation thus raiſed.

ONE certain effect of inflammation, has in the preceding Treatiſe been ſhewn to be a propulſion of a greater quantity of the red globules of the blood into the ſmaller ſets of veſſels, than naturally they were intended to tranſmit: When this occurs in ſores, theſe being emptied into them, muſt according to their quantity, and which again will depend on the degree of inflammation, render the diſcharge very different, both in colour, ſmell

ſmell and acrimony, from genuine pus, which has already been clearly demonſtrated to be produced from pure ſerum only.

FROM this conſideration, then it is evident, that many of the varieties in the diſcharges of ulcers, may, with great propriety, be accounted for; other circumſtances, however, no doubt very often occur, that have ſome influence in producing many of the alterations that are obſerved. The degree of heat eſpecially, that the part is kept in, as will afterwards be more particularly remarked, and the *remora* of the fluids, for a longer or ſhorter time in the cavities of ſores, muſt have no ſmall influence in many reſpects, but eſpecially in the degrees of conſiſtency obſerved in them.

FROM one or other of theſe circumſtances, or from different modifications of all of them, the different appearances in matter, afforded by wounds and ulcers, may be very ſatisfactorily accounted for, without having recourſe to that inexplicable doctrine of their pre-exiſting in the ſyſtem. But although the ſeveral differences obſerved, could not be ſo certainly accounted for, yet their depending

pending *upon ſome particular affection of the ſolids* in the part affected, ſeems to be ſtill more evident and probable, than any other opinion hitherto advanced; and is juſt as certain, as a great many circumſtances under our daily obſervation, that we cannot in any manner account for, and yet have no ſort of doubt as to their reality.

THUS, in what manner the nerves, which in their ſtructure are all ſo ſimilar, act in the production of hearing, viſion, taſte, and all the different ſenſes, is, perhaps, impoſſible ever to determine, as is alſo the action of the liver, ſecretory organs of the mouth, ear, *&c.* in producing fluids of ſuch oppoſite natures from the ſame maſs of blood, and which did not previouſly ſeem to exiſt in it; only that the facts are ſo, nobody pretends to doubt, and till the contrary is evidently demonſtrated, we have the ſame reaſon to believe, that the different appearances of ulcers with reſpect to the nature of their diſcharges, are at leaſt more frequently owing to ſome of the local cauſes already enumerated, than to any indiſpoſition of the general maſs of fluids.

I HAVE ſaid *more frequently* only, becauſe there are no doubt ſome particular caſes of ſcurvy and of other putrid diſeaſes, as was formerly remarked, in which the blood is ſo much diſſolved, as to run off by ulcers and other drains, in the form of a bloody ichor; but ſuch caſes very rarely occur except in high degrees of the true ſcurvy, which in very few ſituations in any country are not to be often met with, and although they did really happen much more frequently, could never account for all the varieties of matters afforded by ulcers.

THE principal objection, therefore, that has been made to the healing of long continued ulcers, ſeems on being examined into, no better founded in theory, than, as was formerly remarked on real experience. For, although it has been ſtrongly inculcated by the generality of authors never to attempt the cure of ſuch ſores, yet all of them have probably been either biaſed by that favourite opinion of morbid matter in the ſyſtem, or, a few having led the way and laid down principles, the reſt have indiſcriminately copied from them, without having recourſe to experience.

NAY

NAY it is even imagined, and, indeed, is pretty evident, that long continued ulcers, inſtead of proving ſerviceable to the conſtitution, are not unfrequently attended with a good deal of riſk and danger. Thus, it is very common, for ulcers on the ſhin and other parts immediately upon the bones, to penetrate ſo deep as to affect the perioſteum, and ſometimes even the ſubſtance of the bones themſelves; which always produce very troubleſome and often dangerous carioſities; every riſk of which is avoided by having recourſe to an iſſue in a proper ſituation, at the ſame time, that every advantage is obtained from it as a drain.

THE conſtitution, muſt likewiſe, in another reſpect, ſuffer much more from the long continuance of an ulcer, than it ever can do from the ſubſtitution of an iſſue; for, ſurely, a very conſiderable part of the matter ſecreted by ulcers, is, again, taken into the ſyſtem by the lymphatics, and when it happens to be of a corroſive irritating nature, which, in old ſores, it frequently is, not only the general maſs of fluids, but even the ſolids themſelves, muſt in time become greatly vitiated.

AND,

AND, accordingly, there is nothing more common, than very troubleſome and even dangerous obſtructions of ſuch *external* glands, as are ſituated in the courſe of the lymphatics leading from ſuch ulcers; and as the glands ſeated internally, are undoubtedly, from the ſame cauſe, liable to the ſame ſort of affections, it ſurely cannot be denied, but that, from this circumſtance alone, conſiderable danger may attend a long continued ulcer.

THUS, from every conſideration, both with reſpect to convenience and ſafety, the cure of every ulcer ought to be attempted; and with the previous caution of inſerting an adequate drain, it may always be done without any kind of riſk.

So much it was thought neceſſary to ſay in general, with reſpect to the propriety of attempting the cure of ulcers; and I have been the more prolix upon this part of the ſubject, as the opinion generally received, appears to be very ill founded, and not adopted from experience, but from hypothetical reaſoning alone.

WHEN the cure of an ulcer, then, is determined upon, the method to be purſued for its accompliſhment muſt next be attended to. By almoſt every author who has laid down directions on this ſubject, four different *ſtates*, as they are termed, are enumerated, as neceſſary for an ulcer to go through in its progreſs towards a cure, *viz.* Thoſe of digeſtion, deterſion, incarnation, and cicatriſation; and different remedies have been recommended as proper for the different ſtates, and for theſe only: And, upon this part of the ſubject, it may be obſerved, authors have ſpoke as certainly and as preciſely, as if every circumſtance, in the treatment of ſuch diſorders, were entirely at their command.

THUS, as digeſtives are pointed out, all the different kinds of turpentines, unguentum Ægyptiacum, powders and tinctures of myrrh, euphorbium, aloes, *&c.* As detergents, unguentum baſilicon, linimentum arcæi, mercurius precipitatus ruber, *&c.* As promoting incarnation, or the growth of new granulations, powders of Maſtich, Thus, *&c.* And as cicatriſers to accompliſh the cure are recommended, a variety both of ſimple and of compound applications,

tions, particularly all the aſtringent boles, earths, lime-water, *&c.*

SUCH a number of diviſions, however, in the ſeveral ſtates or ſtages of ulcers, with the conſequent indications of cure, and remedies recommended for the accompliſhment of theſe, has had a conſiderable tendency to render their treatment more complicated than what in reality is neceſſary. The indications pointed out, with the remedies recommended in the following ſections, will not only be found more ſimple, but their effects alſo more conſiderable, than what, in general, is obſerved to attend a more complex kind of treatment.

WE now proceed to a particular conſideration of the different claſſes and ſpecies of ulcers; and in pointing out the ſeveral diſtinctions, it will be obſerved, as was formerly hinted, that it is ſuch circumſtances only as are exceedingly obvious, and ſuch as, at the ſame time, indicate and require ſome peculiarity in the method of treatment, that are allowed to have any influence in characteriſing a ſpecies.

THUS,

THUS, thoſe of the firſt claſs, will all of them, in their appearances, be found very different from one another; and all of them will likewiſe require ſomething peculiar in the method of cure: And again, thoſe of the ſecond claſs, it is preſumed, are equally well diſtinguiſhed, and, by ſimilar circumſtances, not only from one another, but from every one that with propriety could be conſidered as belonging to the preceding claſs.

IN the firſt diviſion of ulcers are comprehended, as formerly remarked, all ſuch as are merely local, and not connected with any diſorder of the conſtitution; and, in this view, are conſidered the following different ſpecies, *viz.*

1. The ſimple purulent ulcer.
2. The ſimple vitiated ulcer.
3. The fungous ulcer.
4. The ſinous ulcer.
5. The callous ulcer.
6. The carious ulcer.
7. The cancerous; and
8. The cutaneous ulcer.

IN the ſecond claſs of ulcers, are included all ſuch ſores as are the conſequence of, or that are connected

connected with any disorder of the system. The different species of which, are, *the venereal, the scorbutic, and scrophulous ulcers.*

IT is proposed, as first in order, to go through the consideration of the several species of sores contained in the first class; and to proceed afterwards, in course, to those enumerated in the second division.

SECTION II.

Observations on the simple purulent Ulcer.

§ 1. *Of the Symptoms, Causes and Prognosis of the simple purulent Ulcer.*

BY the simple purulent ulcer, is meant, such as, at the same time that it is entirely a local affection, has the symptoms in common to all such disorders of pain and inflammation, very inconsiderable; whilst the discharge afforded, is always of a mild purulent nature, and of a proper consistence.

THIS

THIS ſpecies of ulcer, is fixed upon as the firſt to be treated of, from its being the moſt ſimple that can occur, both in its ſymptoms and method of cure; and as it is to the ſtate of ſuch an ulcer likewiſe, that every other ſpecies of the diſorder muſt be reduced, before a permanent cure can be expected, I ſhall be more particular in the obſervations with reſpect to it than otherwiſe might be neceſſary: And, when ſpeaking upon any of the other ſpecies, if the treatment of theſe ſhall, at any time, coincide with that now under conſideration, proper references, in order to prevent repetitions, will always be made to what may be here advanced.

TOGETHER with the ſymptoms already mentioned under the definition of this ſpecies of ulcer, it is not improper to take notice, that the granulations which ariſe, are of a firm, freſh, red healthy appearance; and if no unforeſeen accident occurs, the cure goes on regularly, and without interruption, till a cicatrix is produced.

IN conſidering the origin of the complaint, it may be obſerved, that even this, the moſt ſimple ſpecies of ulcer, may be produced by a great variety

riety of cauſes; but, from the definition given, it will be underſtood, that they muſt all be ſuch as act merely by producing a local affection without in the leaſt diſordering the ſyſtem.

IN this view are conſidered wounds of all kinds, that do not immediately unite without the formation of matter; and that, whether they may have been attended with loſs of ſubſtance or not; under this head are ranked all chirurgical operations, attended with inciſion into any part of the body.

AMONG other cauſes of ſuch ulcers muſt be mentioned burns, in whatever manner they may be produced, as whether by fire, aquafortis, ſcalding liquids, *&c.* Alſo bruiſes, and in ſhort every external accident that terminates in ſuppuration, with an opening in conſequence of that.

IT is not, however, by any means intended to aſſert, that a ſimple purulent ulcer is always a neceſſary and an immediate conſequence of the different cauſes enumerated, for the very reverſe of that is frequently known to take place. Thus burns eſpecially, are ſometimes ſucceeded by very troubleſome

troubleſome vitiated ulcers, as are bruiſes, and indeed all the cauſes taken notice of: It is only contended, that ſome one or other of them may in general be conſidered as the primary or original production of ſuch ulcers, and that too independent of whatever appearances they may previouſly have exhibited, before arriving at that ſtate.

WITH reſpect to the *prognoſis* in this ſpecies of ulcer, it ſhould almoſt in every inſtance be exceedingly favourable, and that more or leſs ſo, according as there is much loſs of ſubſtance or not; and according to the ſituation of the diſorder and habit of body of the patient. Theſe circumſtances being attended to, together with what has already been mentioned upon ulcers in general, there will never remain any doubt with reſpect to the prognoſtic.

BEFORE proceeding particularly to the neceſſary treatment of ſimple ulcer, it will not be improper to make a few general obſervations upon the manner in which nature ſeems to operate in accompliſhing the cure of ſores; as alſo on the effects of ſuch aſſiſtance as may be afforded by art for effecting the ſame purpoſe.

§ 2.

§ 2. *Remarks on the growth of new parts in ſores.*

THERE is evidently in every ulcer in its progreſs towards a cure, a growth of parts that tend conſiderably to diminiſh any vacancy the complaint may have occaſioned. This ſubſtance from the granulated form it aſſumes, has been generally termed Granulations; and, it appears in every wound in larger or ſmaller proportions, according as the patient is young or old, healthy or otherwiſe; inſomuch that in young plethoric people, the increaſe of parts is often ſo conſiderable, as to riſe above the level of the neighbouring teguments, ſo as to render neceſſary the uſe of different cauſtic applications with a view to ſuppreſs them.

WHEN any loſs of ſubſtance that may have been produced, is thus, as far as poſſible, filled up, the remaining part of the cure conſiſts in the formation of a cicatrix. This is either effected by nature alone, by her producing an exſiccation as it were, of the ſurface of ſuch granulations as had been previouſly raiſed, and in that manner forming a kind of cuticle or ſcarf ſkin; or, is obtain-

ed by art from the uſe of drying aſtringent applications.

BY the formation of new parts, or granulations, as they are commonly termed, it is not here, or wherever the term may be made uſe of, meant to convey the idea of real muſcular or other organiſed parts ever being regenerated, either in ſuch wounds or ulcers, as they may happen to have been deſtroyed in; but merely to expreſs that production, which, it is evident, every ulcer with loſs of ſubſtance is in a ſound body to a certain degree always ſupplied with.

THE real nature of this production is not, perhaps, eaſily to be determined; but, from its ſeveral appearances, it is obviouſly very vaſcular, which makes it probably to conſiſt in an elongation or extenſion of the ſmall blood veſſels that have been divided, with a conſiderable proportion of inorganic cellular ſubſtance; which, again, is moſt likely formed by a matter ſecreted from the mouths of ſuch veſſels, and which ſerves chiefly as a ſupport or means of connection to theſe.

WE

WE are not to imagine, however, that any very extenſive loſs of ſubſtance is even with ſuch a production ever to be entirely filled up; for although in particular circumſtances, nature does effect the repair of very conſiderable accidental loſſes, yet, in general, her operations in this way are very limited. In youth, indeed, before the different parts have arrived at their ultimate increaſe, and while the ſeveral veſſels are yet daily extending themſelves, pretty large vacancies are often almoſt completely obliterated; but we ought not even at that period of life to attribute, as is commonly done, ſuch cures entirely to the growth of new parts; for on reflection it appears very evident, that a circumſtance of an entire oppoſite nature always contributes in a conſiderable degree to their accompliſhment.

§ 3. *The decay of the contiguous ſound parts, a neceſſary circumſtance in the cure of Ulcers.*

THUS, though in the healing of every ulcer, whether it be attended with loſs of ſubſtance or not, there is generally, as already remarked, to a certain degree a growth of new parts produced; yet the greateſt part of the vacancies, that, in theſe caſes, always

always occur, is evidently more diminiſhed by the decay or decreaſe of the divided parts that remain, than by any other cauſe whatever. Indeed, the effect with reſpect to a cure is ultimately the ſame as if all ſuch deficiencies were actually ſupplied with a new ſubſtance; for, if the cavity of an ulcer be diminiſhed, or even entirely annihilated by the ſubſiding or waſting away of the parts that ſurround it, there comes then to be no kind of neceſſity for the formation of others: And in effect, cures are often obtained eſpecially in old people, without any evident growth of parts whatever, and that even in pretty conſiderable and extenſive ulcers.

THIS part of nature's proceſs in the cure of ulcers, is, to a certain degree, obvious even in the ſmalleſt ſores; but the larger the ulcer the more evident always it appears; and particularly becomes exceedingly remarkable in the cure of that very extenſive ulcer, which always remains after the amputation of any of the extremities, eſpecially of the thigh.

IN theſe inſtances, indeed, there is never any conſiderable ſupply of parts obſerved, and the cure

cure always evidently advances, juſt in proportion as the ſkin is allowed to contract, by the waſting away or decreaſe of the parts which it ſurrounds; and ſuch a decay or diminution of bulk, is not, in any of theſe caſes, confined to one ſet of parts only, but extends equally to all, the bones perhaps only excepted.

THUS, after the cure of a ſtump, every veſſel, even the largeſt, is almoſt entirely obliterated for a conſiderable extent; at leaſt nothing is found to remain of them but the thin membranes that compoſed their coats ſhrunk into very ſmall inconſiderable cords; the fibres of the different muſcles are, in the ſame manner, greatly diminiſhed, and the cellular ſubſtance ſeems frequently to be almoſt entirely annihilated. Several opportunities have occurred for diſſecting the ſtumps of patients after death, and the appearances were uniformly as above related.

THERE is ſtill another caſe of ulcer, in which the cure ſeems yet more evidently to be chiefly effected by the influence of the ſame cauſe. In a large inciſed wound, with little or no loſs of ſubſtance, its edges, in the courſe of twenty-four hours,

hours, become greatly swelled and tumified; they are thereby kept at a considerable distance, and the whole exhibits the appearance of a large foul ulcer. In this situation it would remain for a considerable length of time, if either neglected or treated with acrid irritating applications; so soon, however, as by warm emollient poultices, and other proper dressings, a free discharge of pus is obtained, the inflammation diminishes; the swelling of the sides of the ulcer subsides, and the sore gradually contracts to such a degree, that its edges, which before were very much separated, are now brought near to one another.

THE same phenomenon, in a remarkable degree, is observable in the cure of every ulcer attended with much inflammation; where a great part of the treatment consists in removing pain, irritation and swelling, that in such cases always take place.

EVERY small boil even exhibits the same appearances; an ulcer, upon their being laid open, is always left, and the cure depends chiefly on the removal of the inflammation and *swelling* of the surrounding parts.

THESE,

THESE, however, it may be ſaid, are only ſeveral inſtances of *preter-natural* ſwellings, which have originally, perhaps, been excited by the preſence of ſome acrid irritating cauſe; and, upon the removal of that, ſuch tumifactions very naturally ſubſide, and the ulcers occaſioned by them accordingly contract and heal up. The ſame circumſtance, however, has been ſhewn to take place, even with reſpect to the ſubſtance of ſound parts; particularly, as was already remarked, after the amputation of a member, the blood veſſels, nerves, and muſcles, in all ſuch caſes, conſtantly ſuffering a very conſiderable decay.

THE ſame occurrence, likewiſe, happens in all deep tranſverſe wounds that penetrate through the different muſcles, ſo as to reach the bone; a cure, in theſe caſes, being ſeldom to be obtained by the firſt intention, eſpecially when any loſs of ſubſtance has been produced. In the cure of ulcers that remain after ſuch wounds, an evident decay of the extremities of the divided parts always takes place; and, what ſhews it in a remarkable manner, is, that, in all ſuch caſes, the vacancies occaſioned by the wounds are never

near

near so large and conspicuous immediately after the cure, while the patients yet remain lean and emaciated, as they afterwards become, when, in the course of time, by the recovery of health and appetite, every organ of the body, and, among others, the parts that have been divided, come, in a great measure, to regain their former bulk; and when, accordingly, all vacancies that have been occasioned by such wounds appear more considerable.

WHEN, indeed, a wound penetrates only into the cellular membrane, or does not entirely divide the muscles, the cavity produced by it, does, no doubt, in the course of time, gradually diminish, so as, sometimes, to disappear altogether; this, however, is in consequence of the parts below extending in their diameters, which, in the other case of a wound, with loss of substance, penetrating to the bone, never can happen.

THIS opinion, with respect to the cure of wounds, depending, in a great measure, upon the decay of the surrounding parts, was first introduced by a very ingenious French practitioner Mr Fabre; and, like every new doctrine, has,

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by one party been denied to have any ſort of influence, whilſt, by thoſe inclined to favour it, much more remarkable effects have been attributed to it, than, on examination, it will be found intitled to.

THUS Mr Fabre, and Mr Louis, another Surgeon of eminence in Paris, aſſert, that wounds of every kind which do not heal by the firſt intention, are cured *entirely* by an *affaiſement*, as they term it, or a waſting away of the extremities of ſuch parts as have been divided; and abſolutely affirm, that there never does occur any laſting production of new parts in the healing of ſores *.

SUCH an aſſertion, however, is entirely contradictory to every day's experience, and ſeems to be merely the conſequence of lively imaginations, entering keenly into the ſupport of a favourite doctrine; for, although it will readily be allowed, that a very conſiderable part of the cure in every ulcer, eſpecially in old people, is effected by the cauſe aſſigned, yet few practitioners will, probably, deny, but that, in many inſtances, par-

 ticularly

* Vid. Memoirs de l'Academie de Chirurgie, tom. 4th.

ticularly in young people, very conſiderable productions occur, of that vaſcular ſubſtance formerly deſcribed; in ſo much that it is ſometimes a troubleſome enough matter to ſuppreſs ſuch excreſcencies, ſo as to keep them within proper bounds.

As a farther confirmation, that a growth of new parts does, to a certain degree, frequently occur, many very remarkable inſtances might be mentioned from different authors, of conſiderable extenſive loſſes being almoſt entirely renewed by nature. It would here, however, be very foreign to the purpoſe, eſpecially as it does not appear to be in the leaſt neceſſary, as, by every candid practitioner, it muſt be acknowledged, that ſuch occurrences are by no means rare.

THOUGH the opinion, however, cannot be admitted in ſuch an extenſive latitude, as thoſe who ſupport it might incline, yet, from the ſeveral arguments formerly advanced, it evidently appears to have at leaſt a conſiderable ſhare in the cure of every ulcer; and from all that has been ſaid with reſpect to it, this inference, I think, may be drawn: That although the generality of ulcers,

ulcers, to a certain degree, are ſupplied with a ſpecies of new production, yet the cure of all ſuch diſorders depends at leaſt *equally* upon the contraction of the ſurrounding ſkin, in conſequence of the neighbouring parts ſubſiding or diminiſhing in their bulks.

THIS, when there has been any preternatural tumifaction induced, as in ſcrophulous ſores eſpecially, is frequently the caſe, is effected merely by the diſſipation of ſuch ſwellings; but, in others attended with a real loſs of ſubſtance, the extremities of even the ſound remaining parts, muſt, as was already remarked, undergo very conſiderable diminutions.

§ 4. *Of the Effects of Compreſſion in the cure of Ulcers.*

FROM this view of the matter, a very material piece of practice, that was long ago known to practitioners, but which of late has for no evident reaſon, however, been almoſt entirely laid aſide, comes to be clearly accounted for; I mean the uſe of the laced ſtocking in ulcers of the legs, which, by Wiſeman and many other old writers, is much recommended with a view of preventing

preventing theſe œdomatous ſwellings to which patients, with ſuch diſorders, are always liable.

WITH that view, the laced ſtocking is no doubt to be conſidered as the moſt effectual remedy, but it has, in all ſuch caſes, I am perſuaded, been much more frequently of ſervice, by aſſiſting to accompliſh that diminution of the adjoining parts, which has already been ſhewn to be ſo neceſſary for the cure of every ulcer. And, as in this reſpect it acts merely by the degree of compreſſion afforded, it muſt evidently be equally ſerviceable in whatever part of the body ſores may be ſituated; and accordingly, I have conſtantly found, that ulcers in the arm, and wherever a continued gentle preſſure could be applied, have received more benefit from ſuch an application, than from all the ordinary remedies had recourſe to.

As it is the preſſure therefore only, that, in ſuch caſes, is wanted, it is moſt conveniently made, both in the legs and elſewhere, by means of a pretty broad roller applied ſpirally, if neceſſary, from the extremity of the member, to a little above the diſeaſed part; but when no œdomatous

matous ſwellings occur, it generally proves ſufficient to make the roller paſs from three inches or ſo below the ſore, to an inch or two above it. In this manner, the compreſſion can be made more directly on any particular part, than with the laced ſtocking, it is more conveniently applied too, and generally gives leſs uneaſineſs to the patient.

IN the application of ſuch a bandage, it will readily be underſtood, that it ſhould always be done in ſuch a manner as particularly to ſupport the ſkin, ſo as to occaſion as near a conjunction as poſſible of the different edges of the ſore. For, as it is well known, that there never occurs any production of *new ſkin*, or even elongation of the old, as much as poſſibly can, ſhould always be brought to cover ſuch ſoft parts, as by its retraction may have been denuded; for all ſuch as remain uncovered, have afterwards for their protection, a thin ſcarf ſkin only, which, in ſtrength, and indeed every other circumſtance, is greatly inferior to the *cutis vera*.

BY a due attention to this point, much more aſſiſtance is to be got in the cure of wounds and ulcers,

ulcers, than is commonly imagined; for, in by far the greateſt number of ſituations, every wound not attended with much loſs of ſubſtance, may be brought to heal by the re-union of the divided parts; which, in every caſe that can occur, is by much the moſt deſirable method of cure. When this can be properly accompliſhed, immediately upon an wound being inflicted, it ſhould always be done; but very often, when that precaution has either at firſt been neglected, or has not then been practicable from the parts retracting too much, it may frequently be afterwards effected in a later period of the diſorder.

FOR, in large wounds, when in the courſe of fourteen days or ſo, a full ſuppuration has come on, and the inflammation, which originally took place, has in a great meaſure ſubſided, the ſides of ſuch wounds, or ulcers as they then are, may, by proper compreſſion, be either entirely united, or at leaſt brought ſo far to approach one another, as greatly to diminiſh any vacancy that at firſt took place, a circumſtance which always renders much more ſhort and eaſy the cure of all ſuch complaints.

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IN the application of compreſſion, as a remedy in ſores, it will be underſtood, from what has been already ſaid, that in no ſpecies of the diſorder is it to be had recourſe to, while any conſiderable degree of inflammation remains; but ſo ſoon as that ſymptom is pretty much removed, it may always be put in practice with the greateſt ſafety.

THE other moſt remarkable part of the proceſs for the cure of ulcers, as fallen on by nature, we have already obſerved, to conſiſt in the formation of a certain kind of new ſubſtance; the production of which was in ſome meaſure attempted to be explained, by ſuppoſing it to conſiſt in an extenſion of the divided veſſels, with a large proportion of ſoft cellular ſubſtance. This in a ſound healthy ſtate, appears in every ſore, in the form of an infinite number of very ſmall tubercles, of a bright freſh red complection, and, in general, of a tolerably firm organiſation.

As in diſeaſed ſtates of the body, theſe tubercles or granulations, put on very different appearances, according to the particular nature of the complaint they happen to be connected with,

ſuch

ſuch peculiarities as are thereby occaſioned in the ſeveral ſpecies of ulcer enumerated in the enſuing ſections, will be all particularly taken notice of; as will likewiſe the various methods of aſſiſting nature, not only in the correction of the diſeaſed ſtates of ſuch productions, but in carrying on in all ſuch caſes the formation of healthy firm parts; for although the production of theſe is chiefly to be conſidered as an exertion of nature, yet art in different circumſtances is frequently able to afford her very conſiderable aſſiſtance.

THOUGH the means neceſſary for that purpoſe will be afterwards particularly pointed out, it will not be improper, in the firſt place, to make a few obſervations with reſpect to their general tendency, ſo that the operation of all of them, may be then more readily underſtood.

§ 5. *Of the advantages to be obtained from Art, in the production of Granulations in Sores.*

THE principal advantage, which, in this reſpect, acrues from art in the cure of ſores, is the removal of ſuch cauſes as tend to retard the natural exertions of the ſyſtem; and although the different

different obſtructions which nature meets with in her progreſs are exceedingly various, yet they may all with propriety enough be referred to two general heads; *viz.* to ſuch as may be conſidered entirely as of an internal nature; and to thoſe again that operate merely as external or local cauſes.

OF the former kind are, every general diſorder to which the conſtitution is liable, as it is by experience found that a ſound healthy ſtate of the ſyſtem only, is capable of producing proper granulations.

THUS in lues venerea, ſcrophula and ſcurvy, unleſs the general affection of the habit is firſt got the better of, the cures of ſuch ulcers as occur in theſe, can never be properly effected.

THE ſyſtem being in a low emaciated ſtate too, either from a very low diet, or from immoderate evacuations, is found to be very prejudicial to the growth of new parts; for, as the ſupply of any accidental loſs, muſt render neceſſary a greater proportion of nutritious matter, than is requiſite in a complete ſtate of the ſyſtem when

there are no ſuch vacancies to fill up; a patient being in ſuch a ſituation kept upon a low allowance in point of diet, and, eſpecially, if at the ſame time, the diſcharge from the ulcer is conſiderable, the repair of any deficiencies muſt, in ſuch circumſtances, it is evident, go on much more ſlowly than when the contrary of theſe occur. And, in fact, we find, though a very plethoric habit of body with a full allowance of heating nouriſhing diet, is not proper for the cure of any kind of ſores; yet that an emaciated ſtate and a low debilitating regimen prove equally prejudicial.

A MIDDLE courſe, therefore, ſhould in all ſuch caſes be obſerved, and the patient kept in a ſituation at leaſt not much more reduced than in his uſual natural health; but this circumſtance muſt in a great meaſure be regulated by the particular exigencies of every caſe, as in ſome patients of high inflammatory diatheſes, every ſcratch almoſt is apt to inflame and become troubleſome; ſo that when in ſuch, any conſiderable ulcers occur, it is neceſſary often to keep them on very low allowances.

OTHERS,

OTHERS, again, of contrary diſpoſitions, that have been much reduced, and that have no particular tendency to inflammatory complaints, very frequently bear, and are much the better of more nouriſhing foods than they were formerly accuſtomed to; ſo that it muſt always depend on the judgment of the practitioner, to point out ſuch courſes of regimen, as may ſeem beſt ſuited to the particular ſituation of every patient.

THE local obſtructions, again, that occur to the formation of new parts in ulcers, are of various kinds, but may all be reduced to two general ſets; *viz.* to ſuch as act ſolely in a mechanical manner by exciting irritation; and thoſe that are evidently of a corroſive nature.

FROM daily experience, it is found, that granulations in ſores, are, *cæteris paribus*, always moſt quickly formed, when the part is kept entirely free from pain; and when duly attended to, the reaſon of this appears ſufficiently obvious: For whatever is the occaſion of much uneaſineſs, muſt excite in the extremities of the divided veſſels, as irritation does in every ſenſative part to which it is applied, a preternatural degree of action or ſtricture;

ſtricture; which is a ſtate entirely oppoſite to what we have made appear to be the moſt favourable for the production of new parts; for as that probably conſiſts, as elſewhere remarked, in the elongation of the divided veſſels, the more eaſy and lax theſe are preſerved, the more readily always will ſuch an extenſion advance.

AND we do accordingly find, that whatever tends to keep up any conſiderable inflammation in ſores, has a certain effect in putting a total ſtop to the production of granulations.

HENCE the neceſſity of removing from wounds and ulcers, every extraneous body, or whatever tends to produce irritation; and, from the ſame circumſtance, is accounted for, the great advantage of dreſſing ſeldom, with mild ſimple applications, inſtead of the practice which formerly in ſuch caſes prevailed, of dreſſing much more frequently, and that too, with very complex irritating ointments and waſhes.

THE other ſet of local cauſes, that tend to obſtruct the formation of new granulations, and, which were ſaid to be of a corroſive nature, are chiefly

chiefly all thoſe vitiated diſcharges, which by neglect or improper management, are ſo apt to occur in every ulcer. For, almoſt, every kind of matter afforded by ſores, that differs much in its nature, either in colour or conſiſtence from real mild pus, poſſeſſes conſtantly a greater or leſs degree of acrimony or cauſticity; which, in ſome caſes, is ſo very remarkable, that not only the granulations are eat down and prevented by it from riſing, but even the neighbouring ſound parts are frequently entirely deſtroyed.

IN all ſuch diſorders, the principal intention to be had in view, is the removal of that acrid ſtate of the matter, at the ſame time that we attempt its converſion into what is termed laudable pus, the ſeveral means for the accompliſhment of which, will afterwards in the different ſections be particularly enumerated.

THESE different obſtacles, to the formation of granulations, being at laſt removed, nature will always, as far as poſſible, carry on their formation; and when, in due time, ſuch vacancies as occur in ſores, are, either by their means or by the effect of compreſſion, or by both as much as may

may be ſupplied, the only remaining part of the cure, as formerly remarked, is the formation of a cicatrix. This too, is frequently, in a great meaſure, effected by nature, but can often be conſiderably advanced by the uſe of proper applications.

WHILST any deficiencies in ſores remain to be filled up, and whilſt the parts are, for that purpoſe, ſtill ſhooting and extending, the very mildeſt applications, it was remarked, are the moſt proper; but, when no more in that way remains to accompliſh, by any deſtruction of parts that occurred being ſupplied; or when nature ſeems to be at a ſtand, without any proſpect of farther advances being made, the ſame kind of applications, which, in the extending ſtate of the veſſels, would have been prejudicial, comes, for that very reaſon, now to be uſeful.

THUS all the mild ſtyptic powders and waſhes, by contracting or corrugating the extremities of ſuch veſſels as have been divided, and by producing an exſiccation of that inorganic cellular ſubſtance in which theſe are enveloped, tend to induce over the ſurface of ſores that delicate thin covering

covering termed Cicatrix; which, though it is at firſt always very tender, yet comes in time to acquire greater ſtrength, by a farther addition of thickneſs, from that ſame cellular membrane it was at firſt, in a great meaſure, formed from.

HAVING premiſed theſe general obſervations, with reſpect to the manner in which the cure of ſores ſeems to be effected, and which apply, in a great meaſure, to every ſpecies of the diſorder, we now proceed to the more particular treatment of ſimple purulent ulcer.

§ 6. *Remarks on the Indications of Cure, and on the Remedies neceſſary in the Treatment of ſimple purulent Ulcer.*

IN the cure of this ſpecies of ulcer, as there is very little inflammation, and no preter-natural ſwelling ſuppoſed to take place; but merely a vacuity, either from a real loſs of ſubſtance, or from a retraction of parts ſimply divided, the diſcharge, at the ſame time, being of a mild purulent nature; the only indications that appear neceſſary, are,

1*ſt*,

1*ſt*, To diminiſh, as much as poſſible, any vacancy the ulcer may have occaſioned; and,

2*d*, To induce the formation of a cicatrix.

FOR the more effectual accompliſhment of the firſt of theſe, the concurrence of two different circumſtances are requiſite, *viz.* The formation to a certain extent of new granulations; and the diminution or decay of ſuch parts as lie immediately contiguous to the ulcer.

IT has formerly been ſhewn, that either a conſiderable degree of inflammation, or the preſence of any acrid corroſive matter, are both exceedingly detrimental to the production of new parts; ſo that this part of the cure ought to conſiſt entirely, or at leaſt chiefly, in ſuch a treatment as tends moſt effectually to the prevention of theſe cauſes.

WITH this view, the firſt circumſtance to be attended to, is, to avoid the uſe of the ſeveral warm gums, balſams, and ſpirituous tinctures, as recommended, in every caſe of ulcer, by all the old

old writers, and as ſtill continued by many of the modern foreign practitioners.

FOR although, in ſome ſpecies of ulcers, different articles of that kind may be uſed, without much inconvenience, and, in certain circumſtances, may ſometimes even be of ſervice, yet, in every caſe of ſimple ulcer, they always do miſchief, and, for ſuch ſores, ſhould certainly be intirely laid aſide; as ought alſo every application that can occaſion much pain or irritation; for whatever has that effect is ſure to increaſe the inflammation, and muſt, conſequently, for the reaſons formerly given, always retard the cure. Even the common baſilicon, and linimentum arcæi of the ſhops, are, for the ſame reaſons, improper; for every ointment with any large proportion of roſin or turpentine, always irritates very conſiderably.

THE only advantages which, in ſuch caſes, ought to be looked for from the uſe of any ointment, ſhould be, its allowing the different dreſſings to be renewed with leſs pain than they otherwiſe could be; and hence a compoſition of

the blandeſt materials, is, for ſuch purpoſes, preferable to every other.

IN this view any ointment ſimilar to the unguentum cereum, of the Edinburgh Diſpenſatory, anſwers exceedingly well; it being prepared with pure white wax, ſpermaceti, and freſh olive oil, without any other addition.

THE quantities of each of the articles, as there preſcribed, are, four ounces of wax, three ounces of ſpermaceti, and a pound of oil; a compoſition which forms an ointment of a very proper conſiſtence, and which ought to be kept in every ſhop, as the moſt uſeful dreſſing for all the more ſimple kinds of ulcers.

PLEDGITS of lint, ſpread thin with ſuch an ointment, are, in general applied, without occaſioning the leaſt pain; and the uſe of it in this manner, indeed, ſeems never to be attended with any kind of inconvenience; for, however apprehenſive ſome people may be, with reſpect to *every* oily application turning rancid upon ſores, and have, therefore, condemned their uſe in all ſuch caſes, yet an ointment of this nature, I can, from experience,

experience, ſay, is never attended with any effect of that kind. Nor is it eaſy to ſuppoſe that any ſuch preparation, compoſed of freſh materials, between the different dreſſings of ſores, which very rarely ought to be more diſtant than twenty-four hours from one another, can, in the heat of the human body, ever become putrid; which is only, it may be obſerved, another term for rancidity.

ANOTHER objection too has been made, by different practitioners, to the uſe of unctuous applications, in the treatment of ſores, *viz.* their being apt to render the parts lax and flabby, ſo as to prevent the new granulations from being ſo firm as they ſhould, and otherwiſe would be.

THIS I know, indeed, to be the conſequence of a long continued uſe of *warm* emollient applications, eſpecially of fomentations and poultices; but an ointment of the kind recommended, very thinly ſpread, never does produce that effect, and always proves a more agreeable application than *dry charpee* alone; which, unleſs the ſores to which it is applied are covered with large quantities of matter, always occaſions a good deal

deal of irritation, and, in ſome degree, is attended with the ſame effects as gentle eſcharotic applications; a circumſtance that ſeems to have been well known to many of the old writers on Surgery, who frequently recommend dry charpee for ſuppreſſing the over-growth of parts, when, in the cure of ſores, it happens to be too conſiderable.

IN all ſuch ulcers, therefore, as we are now ſpeaking of, theſe pledgits, which, at the different dreſſings, are applied immediately to the ſores, ſhould be always ſpread with ſome ſuch ointment as that recommended: And, with reſpect to the renewal of dreſſings, it may juſt be obſerved, that that circumſtance ſhould be always regulated by the quantity of matter afforded; when the diſcharge is conſiderable, eſpecially in warm weather, and in large ſores, it ſometimes becomes neceſſary to dreſs twice a-day; but, in general, once in the courſe of that time is found fully ſufficient. More frequent dreſſings than are altogether requiſite, ſhould at all times be avoided, as the admiſſion of air at each time of changing, always tends to retard conſiderably the cure of ſores, not only by acting as a powerful irritating cauſe, but

but as tending conſtantly to vitiate the nature of the diſcharge.

THE next circumſtance of conſequence to attend to in this part of the cure, is to endeavour that the matter diſcharged be preſerved in its proper purulent ſtate, both with reſpect to colour, conſiſtence and every other quality; for unleſs very particular attention be given to this point, the beſt conditioned matter always degenerates ſooner or later into a worſe kind: And as matter of a real purulent nature, is the mildeſt and leaſt acrid diſcharge that ulcers ever afford, every precaution ſhould be fallen upon in all ſuch diſorders, to preſerve a continuance of it in that ſtate.

IN the ſimple ſpecies of ulcer now under conſideration, the principal attention which, for that purpoſe, is requiſite, is the preſervation of a due degree of heat in the part affected; this, in whatever part of the body the diſorder is ſituated, is exceedingly neceſſary, but more particularly ſo in the extremities, than any where elſe; the natural heat of theſe parts, not being near ſo conſiderable

conſiderable as in the trunk and other ſituations, where the action of the heart has more influence.

IT has formerly been ſhewn in the treatiſe on inflammation, how neceſſary a proper degree of heat is for the formation of pus in every caſe of abſceſs; and as the ſame circumſtances occur in ulcers, to render it in them equally beneficial, it ſhould always therefore be very particularly attended to, the want of a due regard to this circumſtance alone, very often occaſioning the degeneracy of ſimple ulcers into thoſe of much more inveterate diſpoſitions.

WHILST any degree of inflammation remains in ulcers, the beſt mode of applying heat is by means of warm emollient cataplaſms; but ſo ſoon as that is tolerably got the better of, theſe ſhould be immediately laid aſide; for, in conſequence of their very powerful relaxing qualities, a too frequent and long continued uſe of them, is apt to induce an over-laxity or want of tone in the parts to which they are applied. And the ſame purpoſe may be then anſwered equally well, by applying over the dreſſings, thick quilted coverings

verings of wool, cotton, or of any ſuch ſubſtances as moſt effectually retain heat.

THE good effects reſulting from a proper attention to this circumſtance, I have on many occaſions experienced; and although it may not be of ſo much importance in caſes of ſimple ulcers merely, as in thoſe of more inveterate natures, yet even in theſe it ſhould never be omitted.

IN almoſt every ſpecies of ulcer, poultices in one part of the cure or another, are found to be very uſeful applications; and although, in ſuch as are attended with much inflammation, they may no doubt prove ſerviceable by their ſoftening emollient properties, yet the degree of heat they afford to the part, by its effects in promoting a good ſuppuration, is, I am perſuaded, independent of every other circumſtance, the greateſt advantage they ever produce.

BUT poultices, when uſed with this intention, unleſs they are much more frequently renewed than they generally are, rather do harm than good; for, in order to obtain all the advantages that

that may be derived from them, they ſhould be renewed at leaſt every three hours: But this ſubject having been more fully treated upon, in the eſſay on inflammation, it is not now neceſſary to enlarge farther upon it; for the ſame obſervations then thrown out, with reſpect to the effects of heat in promoting ſuppuration, apply with equal force and propriety here.

THESE different circumſtances, *viz.* The prevention of irritation by very mild dreſſings, and the preſervation of a proper degree of heat in the part, are the moſt certain means both for promoting the growth of new parts, and for obtaining and keeping up a diſcharge of good matter. They ſhould both, therefore, be all along particularly attended to, either till there does not ſeem any farther deficiency to fill up, or till the farther production of parts ſeeming at a ſtand, nature appears to have effected as much as, in ſuch circumſtances, ſhe poſſibly can.

THE other moſt material part of the firſt indication in the cure of ulcers, is to be obtained, as was already obſerved, by means of gentle compreſſion; and this, it may be remarked, is to be

be had recourſe to, and ſhould be going on at the ſame time with the ſeveral applications already mentioned; for, ſo ſoon as the inflammatory ſtate of an ulcer is over, and a diſcharge of good matter is induced, ſlight compreſſion, by means of a roller, as was formerly recommended, may be immediately applied, and ſhould be continued during all the remainder of the cure. It ſhould be applied too, as was then directed, in ſuch a way as not only to act as a gentle preſſure upon the parts immediately ſurrounding the ulcer, but likewiſe to ſerve as a ſupport to the ſkin and other teguments, ſo as to prevent their retraction, which otherwiſe, in large ulcers eſpecially, is very ready to happen.

WHEN, by a proper attention to the moſt material circumſtances in the treatment, and on the neceſſary remedies being continued for a longer or ſhorter period, according to the ſize of the ſores and habit of the patient, any loſs of ſubſtance which occurred being at laſt as far as poſſible ſupplied, the next indication of cure comes then to be attended to, and that is, the formation of a cicatrix.

IT was formerly obſerved, that a cicatrix is frequently effected by nature alone; but, in many caſes, when every deficiency appears to be even thoroughly ſupplied, yet ſtill a cure is tedious in accompliſhing; the ſurface of the ſores remaining raw, and, at the ſame time, diſcharging conſiderable quantities of matter. In ſuch caſes, it becomes neceſſary, to lay aſide the ointment recommended for the preceding part of the cure, and to uſe one of a more ſtyptic drying nature.

IN this view, the *unguentum album* prepared with *ceruſs*, as ordered in different Diſpenſatories, anſwers exceedingly well; fully better, indeed, I have often thought, than the *cerat. e lapide calamin.* ſo commonly had recourſe to in all ſuch circumſtances. Lime water too, often proves a very effectual application in this ſituation of ulcers; the ſurfaces of the ſores being bathed once or twice a-day with it, and, afterwards, dreſſed with ceruſs ointment, a cure is thereby in general ſoon effected.

ON ſome occaſions, again, a proper cicatrix is prevented from forming, by the growth of new granulations being ſo conſiderable as to riſe above the ſurface

ſurface of the neighbouring ſound parts. In ſuch caſes, it becomes neceſſary, to have recourſe to different aſtringent or even eſcharotic applications, of which, the moſt effectual among the milder cauſtics, is blue vitriol; which, unleſs in very obſtinate caſes, almoſt always proves ſufficient; and when it happens to fail, nothing weaker than the common cauſtic ſtone, is ever found to prove effectual.

IN ſlight caſes of this kind, indeed, a cure is often effected by the uſe of dry charpee alone; a pretty tight bandage being at the ſame time applied over all.

IN the preceding obſervations, have been enumerated, ſuch *local* applications, as have been found moſt effectual in the cure of ulcers; but there are ſome circumſtances, though of a more general nature, are yet equally neceſſary to be attended to.

IN every ſpecies of ulcer, even the moſt ſimple, reſt of body, eſpecially of the part affected, is particularly requiſite, inſomuch that unleſs that circumſtance be attended to, all the applications that

that can be had recourſe to, prove of very little conſequence. In diſorders of this kind too, that occur in the lower extremities, the limb itſelf ſhould be always kept, as much as poſſible, in a horizontal poſition, as being the poſture which favours moſt the circulation of the fluids.

REST, and an horizontal poſture, for the cure of ulcers in the lower extremities, have by practitioners in general, both antient and modern, been looked upon as abſolutely neceſſary: In ſome late publications, however, it is aſſerted, that reſt is ſo far from being a *neceſſary* requiſite in ſuch caſes, that patients cure juſt as eaſily and certainly while going abroad, as when under the ſtricteſt confinement.

IN ſome very ſlight ulcerations, this may ſome times be the caſe, and with the aſſiſtance of a pretty tight bandage or laced ſtocking, applied ſo as properly to ſupport the parts, even ſores of a worſe kind may be frequently brought to cure, and the patient, at the ſame time, be allowed to take gentle exerciſe. But, in general, ſo far at leaſt, as my experience goes, the regulations upon this point, enjoining ſtrict confinement, in

every

every ulcer of the extremities, as handed down to us by all the antient writers, appears exceedingly well founded; for, according as they are more ſtrictly attended to or not, the cure commonly advances quickly or otherwiſe.

IN almoſt every caſe of ulcer, particular directions have been given by practitioners, with reſpect to regimen; and, in general, a low meagre courſe has been preſcribed. Such regulations, however, when carried any great length, almoſt conſtantly do miſchief; as they ſeldom fail of relaxing the habit conſiderably, which always of courſe affects not only the diſcharge, but every other circumſtance relating to the ſore.

THE only attention, which, in this reſpect, ſeems neceſſary, is to ſee that *no exceſs* either in eating or drinking be allowed; for, whatever has the effect of producing merely a ſlight temporary fever with any additional inflammation, proves, in ſuch caſes, always very prejudicial, and ſhould, therefore, be avoided. But, in place of a diet *much lower* than uſual, as is moſt frequently recommended, a more full nouriſhing regimen, than the patient even in a ſtate of health

health has been accuſtomed to, is often found ſerviceable.

FOR, the diſcharge of purulent matter proves always ſo very debilitating, that, in large ulcers, when great quantities of it are afforded, that circumſtance alone, generally weakens the patient too much, if the conſtitution is not at the ſame time rendered able to ſupport it by a full nouriſhing diet. And, it is conſtantly, indeed, found, that the cure of ſuch ſores, goes on much more eaſily when the patient is kept in his uſual habit of body, than when his ſyſtem is much emaciated by a very low allowance; nay, I have had many opportunities of obſerving ulcers of even the worſt kinds, being ſoon brought to heal, by the allowance of a good generous diet alone, after they had obſtinately reſiſted all the uſual applications and remedies.

FOR the ſame reaſons that a low regimen is condemned, the uſe of purgatives, and in general, whatever tends to weaken the conſtitution are improper. Nor does it ever happen, if proper attention be paid to the different circumſtances already pointed out, that internal medicines of any kind are neceſſary in this ſpecies of ulcer.

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SECTION III.

Obſervations on the ſimple vitiated Ulcer.

THE ſimple purulent ulcer, as deſcribed in the preceding ſection, being the mildeſt, and, if the expreſſion may be uſed, the moſt *natural* ſpecies of the diſorder that can occur in a healthy body, every deviation from it might be conſidered as a vitiated ſtate. But thoſe here meant to be comprehended under that denomination, are ſuch as differ from it *chiefly* in the appearance and nature of the diſcharge afforded. All ſuch as have any remarkable peculiarity of the ſolids, as they require each of them a diſtinct and ſeparate method of treatment, ſo they are allowed, as was formerly remarked, to conſtitute ſo many diſtinct ſpecies of the diſorder, and will, accordingly, be all ſeparately taken notice of.

WHEREAS, thoſe which differ from the more ſimple ulcer, only or chiefly in the nature of the diſcharge, as they require all nearly the ſame method

thod of cure, and as theſe differences are merely accidental, they have not, for theſe and other reaſons as was formerly remarked, had any influence in forming different diſtinctions.

§ 1. *Of the Symptoms, Cauſes and Prognoſis, of the ſimple vitiated Ulcer.*

THE moſt common appearances of ſuch deviations, in the matter afforded by ulcers, from the more natural ſtate of purulent matter, are,

1. A thin, limpid, ſometimes greeniſh diſcharge, termed Sanies.

2. A ſomewhat red coloured, thin, and generally very acrid matter, termed Ichor. And,

3. A more viſcid glutinous kind of matter called Sordes.

THIS laſt, too, is frequently of a browniſh red appearance, ſomewhat reſembling the grounds of coffee, or grumous blood mixed with water. They are all of them much more fætid than purulent matter, and none of them are altogether free

free from acrimony; but that which has generally been termed Ichor, is by much the moſt acrid of any of them, being frequently ſo ſharp and corroſive, as to deſtroy large quantities of the neighbouring parts.

IN every ulcer diſcharging any of the above-mentioned matters, in conſequence of the acrimony that ſubſiſts in theſe, the parts, in place of filling up with freſh granulations, waſte away more and more, and inſtead of a red healthy complexion, have either a dark brown, or ſometimes, a black, tough, ſloughy appearance. The pain in all of them is conſiderable, and, generally, more or leſs ſo, according as the matter afforded is more or leſs corroſive.

As cauſes of this ſpecies of ulcer, may be mentioned, all thoſe taken notice of in the preceding ſection, *viz.* wounds in general, burns, bruiſes, and in ſhort all ſuch as were enumerated as cauſes of the ſimple purulent ulcer; for even that ſpecies of the diſorder, however mild it may have been, either by being neglected, or dreſſed with improper irritating applications, very rea-

dily degenerates into that we are now ſpeaking of.

IT is not improper here to obſerve too, that ſuch changes in ulcers, from the ſimple to thoſe of a more inveterate kind, happen much more frequently in particular parts than in others; thus all ſuch as are ſeated on the tendons or apaneurotic expanſions of the muſcles, from theſe parts not naturally affording that ſpecies of ſerum neceſſary for the formation of good pus, always prove much more troubleſome and inveterate than thoſe ſeated in the cellular membrane, where a plentiful ſecretion of a fluid proper for that purpoſe generally takes place.

ULCERS, ſuch as thoſe now under conſideration, that are merely local and not connected with any diſorder of the ſyſtem, when they have not been of long ſtanding, and more eſpecially when in young healthy patients, ſhould always have a favourable prognoſis. But, when the contrary of all theſe circumſtances take place, when the patient is very old, the ulcer extenſive, inveterate, and of long ſtanding, the prognoſtic

noſtic in ſuch caſes, ſhould always be very doubtful.

§ 2. *Of the Cure of the ſimple vitiated Ulcer.*

IT was already remarked, that vitiated matters in ulcers proceed, in general, from ſome particular affection of the ſolids, or ſecreting organs in the parts diſeaſed; whereby ſuch kinds of fluids are ſeparated from the blood, as cannot be converted into good pus. The nature of this affection too, it was then endeavoured to diſcover, and, from the ſeveral arguments advanced, it appears evidently to conſiſt in different degrees of increaſed action or inflammation of the parts diſeaſed, occaſioned by one or other of the ſeveral exciting cauſes which give riſe to ulcers.

INDEPENDENT too of what was formerly advanced in ſupport of the opinion, it ſeems to be farther confirmed by the nature of the different remedies found moſt effectual in the cure of ſuch diſorders; which are moſtly of that kind, as have evidently very powerful effects in eaſing pain, and abating irritation.

THUS

THUS warm emollient fomentations, and cataplaſms, in a very ſhort while, ſometimes, even in the ſpace of twenty-four hours, will, frequently, not only give the patient a great deal of relief from pain, but produce even a conſiderable change for the better, in the nature of the diſcharge; and, by being continued for a longer time, till every inflammatory tendency is thoroughly removed, will, very frequently, without any farther application whatever, convert the matter, however bad it may have been, into a natural laudable pus.

THE moſt proper method of proceeding, therefore, with all ſuch ulcers, is to foment the parts three or four times a-day, for half an hour at leaſt each time, with any emollient decoction; and then to apply pledgits of the wax ointment, as was formerly recommended, with warm poultices over all, to be renewed as frequently as they turn cold.

TOGETHER with theſe external applications, when the pain is very conſiderable, as nothing more quickly promotes the cure of ſuch diſorders than the removal of pain, opiates internally are, in

in ſuch circumſtances, often uſed with very great advantage, and ſhould always be given in ſuch doſes, and theſe to be as frequently repeated as circumſtances may ſeem to indicate.

THE habit of body muſt, in the mean time, be alſo attended to, and particular directions, with reſpect to it, given according to the patient's immediate ſituation. Thus, when from a long continuance of an ulcer, or from any other cauſe, the conſtitution has been much reduced, we ought, by a full allowance in point of diet, to endeavour to repair it; and when, on the contrary, the patient is of a full plethoric habit, and liable to inflammatory affections, it then becomes proper to keep him rather upon a low regimen.

IT is in ulcers of this kind which occur in the former of theſe circumſtances, *viz.* In low reduced habits, that the Peruvian bark proves moſt efficacious; in ſuch ſores, indeed, it acts frequently as a ſovereign remedy, and particularly in effecting a change for the better in the nature of the diſcharge.

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THE bark, however, in order to produce ſuch an effect, requires to be given in much larger quantities than, in general, it uſually is: It ſeldom, in any complaint of this kind, is given to a greater extent than three or four doſes a-day, of a ſcruple or half a drachm each; whereas when any remarkable advantages are expected from it, ſix or eight doſes of a drachm each, ſhould always be given in that ſpace of time; and, in ſuch quantities it ſeldom fails of proving a very effectual remedy.

IT muſt be obſerved too, that in the manner directed, very little more of the remedy ever becomes neceſſary, than what, upon the whole, is generally allowed in the uſual way of giving it in ſmall doſes, for with large doſes, and theſe frequently repeated, more real good effects are commonly obtained in the courſe of twelve or fourteen days, than are generally obſerved from its being continued a great number of weeks, when given in ſmall doſes.

IN ſuch caſes of ulcers, however, as occur in what are called inflammatory conſtitutions, and in plethoric habits, the bark muſt be uſed with greater

greater caution ; and, in theſe circumſtances, indeed, ſhould ſeldom be given to any extent, till the inflammatory tendency is pretty much got the better of.

THE ſeveral circumſtances in the cure, as already enumerated, being all duly attended to, whilſt, at the ſame time, the part affected is kept at reſt, and in a proper poſture, it rarely or never happens that the diſcharge is not ſoon converted into good pus ; and when once that is thoroughly accompliſhed, every other appearance of the ſore, in a very ſhort time, generally changes for the better. At leaſt this is commonly the caſe, unleſs the ulcer happens to be connected with ſome general diſorder of the ſyſtem, a circumſtance we do not here ſuppoſe to occur, and which would conſtitute, indeed, a different ſpecies of ſore from that now under conſideration.

So ſoon as the diſcharge is converted into a proper ſuppuration, the moſt material part of the cure is then, in a great meaſure, effected ; for the parts being no longer corroded by a conſtant immerſion in an acrid matter, but, on the contrary,

contrary, being covered by the moſt natural balſam that can be applied to them, commonly ſoon put on a red healthy complexion; and new granulations being then at liberty to form, any loſs of ſubſtance which occurred, comes as far as poſſible to be ſupplied, and that in a longer or ſhorter ſpace of time, according to the depth and ſize of the ulcer, ſituation of the part affected, age and habit of the patient.

SORES of this kind being by theſe means reduced to the ſtate of ſimple purulent ulcers, are to be treated, during the remainder of the cure, exactly in the ſame manner as directed for ſuch in the preceding ſection. That is, with very mild dreſſings, at the ſame time that due attention is paid to the preſervation of a proper degree of heat in the parts, together with the uſe of a continued gentle compreſſion, from the time of the inflammatory ſymptoms having been thoroughly removed.

IT frequently happens, however, in this as in every ſpecies of ulcer of long ſtanding, that although the parts, by proper management, may have been brought to put on a very healthy appearance,

pearance, and although the diſcharge has, from a very bad ſort of matter, been converted into the beſt kind of pus, yet ſtill the ſore cannot be got to cicatriſe, but continues to diſcharge as plentifully as ever.

WHEN, in ſuch a ſituation, the different directions, given in the laſt ſection, with reſpect to the cicatriſation of ſores, do not ſucceed, as may frequently be the caſe, *an iſſue* of a proper ſize inſerted in any convenient ſituation, will often do more towards the accompliſhment of a cure, than all the applications which are generally uſed in ſuch caſes.

AND, indeed, in old habitual ulcers of every kind, nothing but the introduction of adequate drains will ever produce permanent cures; for although, by the uſe of drying aſtringent applications, the ſores may be got covered over with a thin cicatrix or ſcarf ſkin, yet, in theſe inſtances, ſuch cures are never of any long duration.

FOR, independent of the danger to the conſtitution, from the practice of healing old drains before new ones are inſerted, any cicatrices ob-

tained in that manner being very weak, generally ſoon burſt open, in conſequence of that redundancy of fluids that muſt always be ſoon induced in the ſyſtem, by the retention of a very conſiderable quantity of ſerum, which, for a long time, the conſtitution had been accuſtomed to get free of, for the ſupply of pus to the ulcers.

IN all ſuch ulcers, therefore, and indeed in every ſpecies of the diſorder that has been of long ſtanding, the firſt part of the cure ought to conſiſt in ordering an iſſue, of ſuch a ſize as may afford a quantity of matter, in ſome degree proportioned to that which the ſore has generally yielded. And, although the ſituation of ſuch drains has commonly been choſen as near to the part affected as poſſible, yet, provided the ſame quantity of matter be diſcharged, the ſituation of the iſſue is not probably of much conſequence; and therefore, that which is moſt convenient for the patient may be always fixed upon.

THE iſſue having diſcharged for ſome time, and the different remedies, formerly recommended,

ed, being ſtill continued, the cure of ſuch ulcers will, at laſt, be commonly compleated.

IT is in this ſpecies of ulcer, chiefly, that nitre has, of late, been ſo much recommended; but, although I have given it, in this as well as in other kinds of ſores, in very conſiderable quantities, and with every neceſſary precaution, I cannot ſay that I ever obſerved any evident effects produced by it.

SECTION IV.

Obſervations on the Fungous Ulcer.

FUNGOUS excreſcences frequently occur in different ſpecies of ulcers, and very often proceed ſuch lengths as to conſtitute very different complaints, both with reſpect to their appearances, effects, and treatment, from the ſores which originally gave riſe to them; and this is the reaſon for allotting a ſeparate ſection for their conſideration.

§ 1.

§ 1. *Symptoms and Cauſes of the Fungous Ulcer.*

BY the term *Fungus* is underſtood ſuch preternatural riſings of the parts in ſores, as are commonly more ſoft and ſpongy than ſound healthy granulations; which, though *in general* they do not acquire any *great* degree of bulk, yet by very long continuance and neglect, do, in ſome inſtances, arrive at very conſiderable ſizes. And although, as was obſerved, they are generally at firſt lax and ſoft; yet, when of long duration, they likewiſe, in ſome caſes, acquire very firm and even unnatural degrees of hardneſs.

THE pain attending them is not commonly conſiderable, though, in ſome inſtances, it is otherwiſe; and the diſcharge afforded by them varies according to the ſpecies of ulcer they happen to be connected with.

THUS, when a hyperſarcoſis, the term commonly uſed for ſuch riſings in ſores, occurs merely from neglect in a ſimple purulent ulcer, the diſcharge frequently continues all along tolerably good; and, on the contrary, when connected with an ulcer diſcharging any of the leaſt acrid

of

of the vitiated matters, as in ſome inſtances is the caſe, the diſcharge moſt readily ſtill continues to be of the ſame nature.

WITH reſpect to the cauſes of the diſorder; when ſpeaking of ſimple purulent ulcers, it was obſerved, that in a healthy ſtate of body, and eſpecially in young people, the new granulations that form in ſuch ſores, are very apt to puſh forward too much, ſo as to riſe above the ſurface of the neighbouring parts. This, by attending to the directions then given, may almoſt always be effectually prevented; but if, in ſuch circumſtances, the ſore is neglected, and the parts are allowed to advance much further, the diſorder we are now ſpeaking of comes then to take place. And if not attended to for yet a ſtill longer time, as with poor people eſpecially is frequently the caſe, even this the moſt ſimple ſpecies of fungus, degenerates into a very troubleſome diſorder; it being in this manner, that the very hardeſt excreſcences are commonly produced.

ANOTHER variety of the complaint ariſes in the cure of wounds and ulcers of different kinds, from

from not attending to their being found at bottom before the new granulations are allowed to proceed any length. In this manner, whether from any sinus being left unfilled up, or from any corrupted parts that may not have been thrown out, continuing to act as extraneous bodies, the granulations that first appeared, still continue to advance; but instead of cicatrising when on a level with the neighbouring sound parts, go on rising considerably beyond them, till the disease now under consideration is pretty far advanced.

AND, when in this way a fungus has been given rise to, it continues to increase from day to day, till the cause which originally produced it is discovered and removed, either by art or nature, in consequence of a plentiful suppuration being formed below, and bursting out; which, by laying open the seat of the complaint, gives room for a proper treatment to take place.

§ 2. *Of the Cure of the fungous Ulcer.*

BY a proper attention to the case, and to the two different sets of causes mentioned, it will, in general

general, be eaſily diſcovered from which of the two the diſeaſe has originally proceeded; and ſo ſoon as the cauſe is diſtinctly known, the method of cure to be purſued, is juſt as certainly determined; which, till then, could not with propriety be ſet about, as in the two different caſes, the remedies neceſſary, are exceedingly oppoſite.

WHEN it is found, that the complaint has proceeded merely from an overgrowth of parts, and that there is no diſeaſe lurking at the bottom of the ſore; when the fungus is of a conſiderable breadth, and, eſpecially, when it does not riſe to any great height, the uſe of eſcharotics ſhould be immediately had recourſe to.

OF ſuch applications, a great variety have been recommended; by many even the actual cautery has been propoſed; and by others, we are directed to remove at once all ſuch parts by the ſcalpel.

EITHER of theſe methods, would, no doubt, in every caſe, prove very effectual, and a great deal more expeditious than any other that can be fallen upon; but, the very appearance of either of

of them, carries with it ſo much cruelty, as effectually to prevent, almoſt every patient, from ſubmitting to ſuch an operation; and that the more readily, as it is known to every one, that ſuch complaints, can be juſt as certainly, though, perhaps, not ſo quickly removed, by means of much more gentle remedies.

OF all the artificial cauſtic preparations, enumerated by authors, *cauſticum lunare* is, for ſuch purpoſes eſpecially, by much the beſt. It acts more quickly, and is not attended with more pain than many of the milder ſorts; we are always ſure of its doing the buſineſs effectually, which is not the caſe with any of the others; and it is not near ſo apt to run, and ſpread over the neighbouring parts, as ſome of the other compound forms of cauſtic, which is, frequently, a very troubleſome circumſtance attending them.

A SLIGHT touch every ſecond or third day, with this kind of cauſtic, will, in a longer or ſhorter time, according to the ſize and texture of the riſing, almoſt, always, at length get the better of ſuch complaints. After the application of the cauſtic, the parts ſhould be covered with dry lint, and

and not, as is commonly done, with any kind of unguent, which always tends conſiderably to deſtroy the activity of ſuch remedies.

WE have hitherto been ſuppoſing, that the ſurface of the fungus, is of conſiderable extent, and that it is not to any great height raiſed above the contiguous ſound parts; but whenever the reverſe of theſe circumſtances take place, *viz.* a narrow baſe, and the height of the excreſcence conſiderable, the moſt expeditious and eaſieſt method, then, always is, to take it off by ligature; which being applied at its root tolerably tight, and ſtraitned a little every day, ſoon deſtroys the circulation in the ſwelling ſo entirely, as to cauſe it in a ſhort time to drop off.

WHEN the riſing is, as was obſerved, narrow at the baſe, and eſpecially, when it is in the leaſt pendulous, a ligature can be applied and kept on with the greateſt eaſe; but when the tumor is broader below than above, it is not poſſible without ſome aſſiſtance to prevent its ſlipping off. It may always, however, be certainly and very eaſily effected in the following manner.

A ſtrong ſtraight needle, with an eye near its point and fixed in a handle, being puſhed through from one ſide of the tumor to the other at its baſe, and having two ſtrong waxed threads introduced at its eye, is to be again drawn back, leaving the threads with their ends hanging out at each ſide of the ſwelling. In this ſituation, a firm ligature is to be formed, round one half of the tumor, by the two extremities of one of the threads; and with the other two, the other half is in like manner to be comprehended; and each of them being from time to time properly tightned, both halves of the ſwelling, will, in general, very ſoon fall off. The hint of the practice here recommended, was taken from the deſcription of a curved needle of this kind, recommended by Mr Cheſledon, for the extirpation by ligature, of diſeaſed tonſils, which, without ſome ſuch contrivance, could never with propriety be attempted.

THE fungus being by either of theſe methods removed, the ſore is then to be treated as was formerly directed for the management of ſimple purulent ulcers.

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THE other ſpecies of fungus taken notice of, that proceeds, as was obſerved, from the new granulations in ulcers not being raiſed on a ſure foundation, purulent matter or ſome other extraneous body being lodged at the bottom of the ſore, is, in general, very eaſily diſtinguiſhed from the preceding. It riſes with much greater rapidity, and is not near ſo firm; being, on the contrary, always more ſoft and flabby than healthy granulations.

BY attending to theſe, and all the other circumſtances of the ulcer, the cauſe can ſeldom remain long in doubt, and ſo ſoon as it is diſcovered, the firſt thing to be done, is, by a proper opening, to give free vent to the confined matter. After which, by taking care, that the ſore fills properly up from the bottom, the cure will go eaſily on in the ordinary way. Nor unleſs the fungus has been very conſiderable, can there ever be any occaſion for the uſe of eſcharotics, for, in ſuch caſes, the granulations are commonly ſo ſoft and ſpongy, as to waſte away of themſelves in the courſe of the cure, without any aſſiſtance whatever from cauſtics.

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THESE, in general, are the only cases of fungus that in local ulcers ever prove troublesome, excepting, perhaps, that which occurs as a symptom in carious ulcers, and which, in its proper section will be taken notice of. These species now described, indeed, might no doubt be considered as symptomatic, and for that reason, it may be said, they should not be allowed to constitute distinct complaints; for the reasons formerly given, however, and particularly from their treatment being very different from that which is necessary in any other symptom of ulcer, it was thought proper to allow them a separate section.

SECTION V.

Observations on the sinous Ulcer.

§ 1. *Of the Symptoms and Causes of the sinous Ulcer.*

BY sinous ulcer, is meant that species of sore with one or more openings running into it, from chinks of the same, or of different directions;

tions; and which generally are ſeated in the cellular membrane, between the common teguments and muſcles, or between the interſtices of the different muſcles themſelves.

THESE different ſinuſes ſerving as reſervoirs, both for the matter formed in the body of the ſore, and for that afforded by the ſides of their own cavities, makes the diſcharge of all ſuch ulcers, when, by preſſure, the matter is emptied into them, appear much more conſiderable than in reality it ever is.

A ſinus, as thus deſcribed, is the moſt ſimple ſtate of the diſorder, and is, by long continuance, or by the uſe of drying aſtringent applications, liable to become hard and callous in its internal ſurface; and, in ſuch a ſtate, from its ſuppoſed reſemblance to a pipe, is termed a fiſtula; of which nature is the *fiſtula in ano*, a well known troubleſome diſorder.

THE moſt frequent cauſe of ſinuſes forming in ulcers and abſceſſes, is the want of a free vent to the diſcharge; which, as it naturally falls to the moſt depending ſituation of the part, if it is not

not there, as it ought to be, let out, very eaſily inſinuates itſelf into the ſoft yielding ſubſtance of the cellular membrane, and proceeds on gradually till it ſome where or other finds an opening, either externally, or into ſome of the neighbouring cavities.

VERY tight bandages too, applied directly upon ulcers, if they are not made to act likewiſe upon the neighbouring ſound parts, for ſome way both above and below the ſores, are not unfrequently attended with the ſame effect; and, in ſuch a way, therefore, ſhould be always avoided.

IN every caſe of recent ſinus, and even, in general, in thoſe of longer ſtanding, if they can be eaſily and freely got at, with proper applications, and when the conſtitution, in other reſpects, is healthy, we may almoſt always venture upon a favourable *prognoſis*. But when the complaint has been of very long continuance, and eſpecially when the different ſinuſes open into any of the joints, or are much out of the way of operation; in ſuch caſes, a cure becomes both very difficult and doubtful. Nor is there, indeed, any complaint that more frequently baffles practi-

tioners,

tioners, than ſome ſpecies of this diſorder, particularly the *fiſtula in ano.*

§ 2. *Of the Cure of the ſinous Ulcer.*

IN recent complaints of this nature, we are directed by all the old writers, as alſo by many of the moderns, to make uſe of what they call vulnerary or healing injections. And, in the more advanced ſtates of the diſorder, when, by long continuance, the ſides of the different ſinuſes have become callous, *eſcharotic* injections and powders have been recommended: But none of theſe have ever been found to produce any real good effects, and a too frequent uſe of them has often rendered hard and callous ſuch ſinuſes as before were of the moſt ſimple nature.

OTHERS again have adviſed, in every caſe of this nature, eſpecially when the complaint is at all of a fiſtulous nature, to lay the different ſinuſes open, from one end to the other, and, by cutting out all the hardned parts, ſo to convert the whole into one common ulcer, and to proceed afterwards with the cure in the ordinary manner.

THIS method will, no doubt, very frequently effect a cure; but, independent of the great pain, and very large unseemly cicatrix which it is always the occasion of, it cannot, in every case, with safety, be put in practice.

THUS, when sinuses run very far up the rectum, it can never conveniently be done; and when, as is frequently the case, they penetrate deep, and run below either large blood-vessels, tendons, or nerves, it would never surely, in these cases, be advisable to have recourse to such treatment.

BUT although the practice was even altogether free from danger, it ought, in almost every instance, to be laid aside, since we can by a much more simple and less painful operation, be always as certain of obtaining a cure as we ever could be, either by a simple incision, or by the entire destruction of parts.

THE intention of cure, in every case of sinus, is to produce a coalescence of its sides, so as to destroy any vacuity that may have occurred.

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AND the moſt effectual means for accompliſhing this, is, firſt to make a depending orifice for a free exit to the matter; and then, by a gentle irritation, to induce, on the internal ſurface of the ſinus, a ſlight degree of inflammation, which, by experience, is known to be that ſtate moſt favourable to the production of adheſion between any two parts; ſo that a firm union of the ſides of the ſinus to one another may, in due time, be obtained.

Now, both theſe intentions are fully anſwered by the introduction of a ſeton from the orifice in the ulcer, along the courſe of the ſinus to its other extremity; where an opening, large enough for the diſcharge, ought to be made in the manner formerly directed in caſes of abſceſs.

THE cord of cotton or ſilk ought at firſt to be pretty large, more or leſs ſo according to the capacity of the ſinus; to be diminiſhed gradually, as the cure advances, by taking away a thread or ſo from its thickneſs every ſecond or third day. And at laſt, when the diſcharge is greatly leſſened, by the vacuity occaſioned by the ſinus being moſtly filled up, the ſeton ſhould be totally

withdrawn, and a bandage, ſomewhat tight, being applied over the part, and continued for ſome time longer, a complete cure will, in general, be, in due time, effected.

THE firſt ſtep to be taken, then, in all caſes of ſinus, is to diſcover the direction in which they run, and which may commonly be eaſily done, either by the introduction of a probe, or by obſerving where the matter points, on being allowed to collect for ſome time, and from whence it comes, on the parts being preſſed. And into every ſinus that opens into the ulcer, a ſeton, as above directed, ſhould be introduced.

THIS method of curing ſinuſes, by the uſe of the ſeton, is free from all manner of danger, and is admiſſible in almoſt every caſe of ſinus that can occur. Even when ſinuſes run deep among the muſcles and blood-veſſels, and when it would be unſafe, therefore, to uſe either the ſcalpel or acrid injections, ſetons, by means of the director, as formerly directed for abſceſſes, may be always had recourſe to with the greateſt ſafety.

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THE practice here recommended is ſeldom found to fail in any caſe of ſimple ſinus; and it, in general, even anſwers in ſuch as are conſidered as real fiſtulæ.

IF it was not for the inconvenience which this application would, in that ſituation, always occaſion, I have no ſort of doubt but the ſeton would prove a much more effectual remedy in caſes of fiſtula in ano, than any other that has as yet been employed. In ſimilar caſes of this kind that occur in the perineum, I have known it uſed with the greateſt advantage; and it is in that ſituation, indeed, particularly proper, as the cicatrix formed after the opening of a long ſinus, in the common method with a ſcalpel, proves there frequently more troubleſome and painful to the patient, than even the original diſeaſe it was intended to remove.

THE ſinuſes, by theſe means, being at laſt removed, the ulcers they have been connected with are then to be cured in the ordinary manner, as directed in one or other of the different ſections, for the ſpecies of ſore they may happen to belong to.

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THIS part of ſurgery, it may be obſerved, is much indebted to the ingenious Mr Pott, for the ſimplicity he has been, in a great meaſure, the means of introducing, in the treatment of fiſtulous complaints in ano and in perineo. In all of which, as was already remarked, it uſed formerly to be, and with many, indeed, ſtill is the practice to cut the affected parts out entirely, whether they are much hardned or not; which not only occaſions a great deal of unneceſſary pain, but very ſeldom produces ſuch an agreeable or ſpeedy cure as is obtained by merely laying the parts open with a ſimple inciſion; and which is all that, even in the moſt obſtinate caſes, ſhould be ever attempted. For, if a cure cannot be obtained by ſuch an operation alone, or by the ſeton, when it can be uſed, as we have lately adviſed, cutting out the parts never will effect it, unleſs they are all evidently in a ſchirrous ſtate; in which caſe extirpation of the diſeaſed parts may, no doubt, in ſome caſes, be neceſſary.

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SECTION VI.

Obſervations on the callous Ulcer.

§ 1. *Of the Symptoms and Cauſes of the callous Ulcer.*

AN ulcer is ſaid to be callous when its edges, inſtead of contracting, and ſo diminiſhing the ſize of the ſore, keep at a ſtand, turn ragged, and at laſt, by acquiring a preternatural thickneſs, often riſe conſiderably above the level of the neighbouring parts: And, as it is generally from neglect, or improper treatment, that ulcers do turn callous, the diſcharge afforded by them is commonly a thin vitiated matter.

IT is in this ſpecies of ulcer chiefly too, that varicoſe veins occur as a ſymptom, eſpecially when the complaint is ſeated in the lower extremities. This ſeems to be owing not only to the difficulty the blood, in ſuch ſituations, meets with in its return to the heart; but, in a great meaſure,

ſure, to the ſtricture occaſioned by the calloſities on the courſe of the different veins; a circumſtance which, in extenſive ſores of this kind, muſt, no doubt, have a conſiderable influence.

BY many, even late writers, this ſpecies of ulcer has been always termed Varicoſe; from their ſuppoſing ſuch ſores to proceed from, and to be as it were, fed by matter furniſhed to them from theſe ſwelled veins, which, frequently, to appearance ſeem to open into them*.

THIS error, however, it is evident, muſt have proceeded from want of attention to the cauſe of ſuch ſwellings in the veins; together with a miſtaken notion with reſpect to the formation of pus and other kinds of matter; which were formerly, in general, ſuppoſed to circulate with, and to be depoſited from the blood; but which has already been demonſtrated in the preceding eſſay, to be an opinion entirely void of any real foundation.

WITH reſpect to the cauſes of calloſities in ulcers, it may be remarked, that they may all be reduced

* See Turner's Art of Surgery, Vol. 2. page 3.

reduced to the general head of neglect and improper management. When fores are injudiciouſly treated, either by irritating, or by very relaxing applications, or when entirely neglected, ſo that fungous excreſcences are either allowed to ariſe, or different dreſſings and other extraneous bodies are left to remain too long in their cavities; ſuch ſubſtances come at laſt to ſtand greatly in oppoſition to the farther diminution or contraction of the ulcers. And, the ſmall veſſels of their edges being thus prevented from proceeding farther in a proper direction, puſh upwards, and ſometimes even backwards, till, in conſequence of the uſual preſſure from the neceſſary bandages, they naturally come to acquire a morbid hardneſs or calloſity; and which, ſo long as it is allowed to remain, very effectually prevents the accompliſhment of a cure, however judiciouſly the fores may in other reſpects be treated.

§ 2. *Of the cure of the callous Ulcer.*

FROM the conſideration of the fore-mentioned cauſe of the diſorder, the firſt ſtep towards a cure, it is evident, ſhould conſiſt in its total removal.

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THUS any improper applications, which, till then, may have been uſed, ſhould be immediately laid aſide; and if any fungous or other extraneous body, appears to be doing miſchief, theſe and every other obſtruction to a cure, ought as ſoon as poſſible to be removed. This being thoroughly accompliſhed, and the ſore brought to a clean healing condition, the different calloſities are then to be deſtroyed, for till that is completely effected, it is in vain by any kind of application to expect a cure.

IN very recent inſtances of ſuch complaints, warm emollient cataplaſms continued for a proper length of time, will ſometimes by ſoftening the calloſities, without any other application, anſwer every intention of cure. But it is only in the earlieſt periods of the diſorder that theſe ever prove effectual; for when it has been of long ſtanding, ſo that the edges of the ſore have acquired *much* preternatural hardneſs, neither the uſe of emollients, nor of gum-plaiſters, as recommended by many authors, are ever attended with any remarkable advantages.

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THE only remedy then to be had recourſe to, is the ſcalpel or cauſtic; and as this laſt, when properly managed, is equally certain with the other, it ſhould, as the eaſieſt method, be always had recourſe to; and for reaſons mentioned in a former ſection, the lunar cauſtic ſhould be here likewiſe preferred. The hardned parts being rubbed gently over with it, once in two or three days, or as frequently as the ſlough occaſioned by its preceding application falls off, the calloſities will thereby, in general, be ſoon got the better of; and the ſore having been previouſly, as already directed, reduced almoſt to the ſtate of a ſimple purulent ulcer, is afterwards to be treated accordingly.

IN the liſt of ſymptoms, as formerly enumerated, varicoſe veins were mentioned as one; theſe, it might be imagined, when the cauſe which produced them was removed, would likewiſe diſappear. This, however, is very ſeldom the caſe, for parts that have once loſt their tone, do not often ſoon recover it again. So that here, as in other caſes, independent of the removal of the original cauſe of theſe ſwellings in the veins, we muſt alſo pay ſome attention to their ſupport, in order that

they may the more eaſily recover their former ſtrength.

FOR this purpoſe, nothing has ever been found ſo effectual, as the laced ſtocking, or ſpiral bandage, as formerly recommended for different circumſtances in the cure of ſores. In order to have a proper effect, however, in every caſe of varix of long ſtanding, it ought to be continued for a very conſiderable time: And there is not, it may be obſerved, any inſtance of the complaint ever being ſo bad, but that in this way alone, either an entire cure may be obtained, or the inconvenience at leaſt ſo far palliated, as to render quite unneceſſary that operation frequently recommended, of extirpating, as in caſes of aneuriſm, the diſeaſed or ſwelled parts.

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SECTION VII.

Obſervations on the carious Ulcer.

§ 1. *Of the Symptoms and Diagnoſis of the carious Ulcer.*

BY the term, Carious Ulcer, is here underſtood that ſpecies of the diſorder only, which is connected with a *local* affection of a bone. For although the ſpina ventoſa, rickets, and ſome other diſorders of the bones may, in particular circumſtances, perhaps, come under the ſame denomination, yet as it is probable that ſuch affections, as occur in theſe diſeaſes, are connected with, and depend upon, ſome general diſorder of the ſyſtem, and which, with more propriety, comes under the province of medicine than of ſurgery, their conſideration here, it is evident, would be deviating very much from our plan. All that is here intended, being to give as clear and conciſe a deſcription as poſſible of

of that ſpecies of caries, in which ſurgery is more particularly intereſted, and in which, by proper attention, we often have it in our power to be of more real ſervice, than in almoſt any other chronic diſorder that comes under the ſurgeon's management.

IT may likewiſe be obſerved, that ſo far as theſe diſeaſes of the bones above-mentioned are to be conſidered as local affections, and which, after the removal of the general diatheſis which produced them, is frequently the caſe, the different directions afterwards given, then apply with equal propriety to them, as to the moſt ſimple caſes that occur.

THE moſt clear and ſimple idea that can be given of a caries, is, that it is a diſorder of the bones of exactly the ſame nature as a ſphacelus or gangrene is of the ſoft parts; a circumſtance that will clearly appear, both from the ſymptoms, cauſes and method of cure.

THE blood veſſels in bones not being near ſo numerous in proportion, as in the ſofter parts of the body, the anaſtomoſing of different veſſels cannot

cannot in them occur ſo frequently; ſo that when any conſiderable artery of a bone happens to be deſtroyed, the parts ſupplied by it naturally ſuffer much more than what, from a ſimilar cauſe, any of the ſoft organs would do.

AND, as all the blood veſſels of bones are communicated to them through their ſurrounding membrane the perioſteum, upon which they generally run for a conſiderable way, before penetrating deeper, it is not very uncommon for a caries to occur in a bone which has ſuffered no other *apparent* injury than that of having a very ſmall portion of its membrane deſtroyed.

I would not, however, have it underſtood, that a caries muſt always neceſſarily follow a deſtruction of any part of the perioſteum, for the contrary of that very frequently happens, and unleſs the injury has been ſo conſiderable as, at the ſame time, either to affect the mechaniſm of the bone itſelf, or to occaſion, as was obſerved, the deſtruction of ſome principal artery, caries never will occur merely from the perioſteum being abraded; but whenever an accident has had either

either of theſe effects, the other will always very certainly follow.

FROM the firſt appearance of a bone, after being laid bare, unleſs its ſubſtance has been evidently affected, we never can at once determine preciſely, whether a caries will ſucceed or not: In mere abraſions of the perioſteum from ordinary accidents, I would, from a number of obſervations, ſay, there is, at leaſt, an equal chance that it will not; a ſhort time, however, will always reſolve the uncertainty.

FOR, if, at the end of the fourth day at fartheſt, a bone that has been denuded ſtill retains its natural appearance, we may, in general, with pretty great certainty, conclude that no carious affection is to ſucceed, and may accordingly go on with ſafety in the treatment, as in every caſe of ſimple wound, which, in no caſe, can, with propriety, be attempted, whilſt any uncertainty remains with reſpect to the ſtate of the bone: And hence the great conſequence of being able ſoon to determine, whether a bone laid bare is to be attacked with caries or not.

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FOR, if from want of attention, a cure ſhould be attempted in a caſe where caries is to follow, and ſhould, as it frequently might do, ſucceed, the whole fabric would be again to deſtroy, much unneceſſary pain thereby given to the patient, and a permanent cure be much longer in obtaining, than if it had been properly ſet about at firſt.

IN general, however, as was already remarked, if ſuch an accident is to terminate in caries, it uſually ſhews itſelf in a very ſhort time. By the end of the third or fourth day at fartheſt, the bone begins to loſe its natural healthy appearance, turns firſt of a pale white, and then gets a ſlight tinge of a yellow complexion; and whenever this begins to appear, there can be no longer a doubt of what will be the conſequence.

IT ſometimes continues, however, in that ſtate for a good many days, and by degrees gets a more deep tallow-like appearance, in which way it commonly remains for a longer or ſhorter time, according to the violence of the inflicting cauſe; and afterwards goes through the different ſtages of brown, light dark, *&c.* till it has acquired

acquired a darkneſs of the deepeſt dye, a period at which that portion of the bone is ſuppoſed to be arrived at, perhaps, the higheſt degree of mortification.

THE diſcharge from ſuch ulcers, is never of the conſiſtence of good pus, is generally conſiderably thinner, and, from the firſt appearance of caries, acquires a moſt diſagreeable fœtor, which always turns more conſiderable, as the different ſtages of the diſorder advance; and at laſt too it gets a blackiſh hue, at the ſame time that it frequently becomes exceedingly acrid.

As the ſeveral degrees of blackneſs or mortification go on, ſmall foramena or holes ſeem as it were to form in the diſeaſed parts, and by degrees increaſe conſiderably, till even the moſt ſolid bones acquire a kind of ſpongy appearance. In this ſituation, the mortified portion generally becomes looſe, and when preſſed upon, a conſiderable quantity of a fattiſh-like matter, with an intolerable fœtor, can commonly be forced out from the different openings, which ſo taints the whole diſcharge from the ulcer, and gives it ſuch a *very peculiar*

peculiar ſmell, as to render it ſcarce poſſible for a ſurgeon, who has once known thoroughly what it is, ever to be deceived as to an ulcer being attended with a carious bone or not. In ſo much that this circumſtance alone affords almoſt as certain a diſtinction in caſes of latent caries, as any that can be given.

IN ulcers attended with a carious bone, the fleſhy parts never have a healthy appearance, are ſoft and more flabby than natural, and inſtead of a florid red, have rather a dark brown, together with ſomewhat of a glazed complexion.

THE granulations, however, always advance quickly enough, and would frequently proceed even much too far, if they were not prevented by art, which it is always neceſſary to do, till the diſeaſed part of the bone is either caſt off by the efforts of nature, or cut out by art, ſo as that the cure may take place with certainty from the bottom of the ſore. And when neglected for any conſiderable time, theſe ſoft productions in carious ulcers, frequently increaſe ſo remarkably, as to form very large and troubleſome excreſcencies.

WE have hitherto been ſuppoſing, that only a portion of the ſubſtance of a bone has been affected; but the ſame phenomena likewiſe occur when the caries has been ſo conſiderable, as to affect a bone through its whole circumference. Only, in that caſe, the caries generally advances more quickly, and, in the one, a cure is ſometimes obtained by a ſingle lamena or ſo being caſt off, whereas in the other, the whole thickneſs of the bone is frequently obliged to be taken out.

SUCH are the different appearances of caries, proceeding from an external accident that has laid the bone fairly open to view; but the ſame kind of diſeaſe occurs frequently in a more latent manner, and, in ſuch caſes, proves always, in every reſpect, a great deal more troubleſome.

ULCERS of long ſtanding above the tibia, or any other bone not thickly covered with fleſh, merely by the matter inſinuating itſelf to the perioſteum, and there producing any eroſion or inflammation of that membrane, and ſo frequently of the bone itſelf, very often prove the origin of troubleſome carioſities; and which again, ſo long

long as they remain, effectually prevent the proper cure of all such sores, notwithstanding the use of every application that can be had recourse to. For when, in consequence of very drying astringent remedies, a cicatrix happens in such circumstances, to be procured, it proves constantly a short temporary cure only, as the disease, in the course of a short time, uniformly breaks out again.

IN such cases, when the external ulceration is not attended with a great destruction of parts, so that the bone still remains with a tolerable thick covering, a caries is not always easily distinguished; so that practitioners are frequently, for some time, at a loss how to proceed in the cure: With a little attention, however, and especially with the assistance of experience in former similar circumstances, a spoiled bone may, in general, be readily enough detected.

WHEN a probe can be introduced at any opening that may take place, and admission can thereby be got to the bone, if a roughness of its surface is discovered, the case becomes then altogether evident.

SUCH

SUCH information, however, is not always to be obtained, for frequently there is no evident opening in the ſurface of the ſore, and, if there are any, they are often ſo ſmall that no inſtrument, proper for the purpoſe, can get admiſſion. And on other occaſions, again, when the opening is even tolerably large, and when a caries does certainly exiſt, yet the diſeaſed part cannot be got at with the probe, from the ſinus leading to it running either obliquely, or perhaps in different winding directions.

ALTHOUGH in ſuch caſes, however, the bone itſelf cannot be immediately reached, yet, by attending properly to the appearance of the ſore, and nature of the diſcharge, we need not often be at any great loſs.

IF a caries of the bone does take place, any new parts which may have appeared in the ſore, are commonly, as was formerly remarked, ſoft and flabby; and, in place of a regular ſurface, the new granulations ſprout up in different cluſters, of the ſize of ſmall nuts or ſo; and, inſtead of a healthy red appearance, have uſually a dark brown complexion.

THESE

THESE, together with the diſcharge being of a thin, dark, greaſy appearance, and eſpecially when attended with that peculiar abominable fætor which ſpoiled bones always have, prove almoſt as convincing circumſtances as if the bone itſelf was laid bare.

§ 2. *Of the Cauſes and Prognoſis of the carious Ulcer.*

THERE have commonly been enumerated by authors, as the cauſes of caries, whatever accidents could occaſion either denudation, loſs of ſubſtance, or eroſion of a bone. But it is a circumſtance well known to every practitioner, that the common teguments and perioſteum are very frequently deſtroyed, without any carious affection enſuing; and that even a very conſiderable loſs of ſubſtance in a bone, may, and frequently does occur, without being followed by any ſuch appearance.

THE cauſes, therefore, in general, of caries, may be ſaid to be, whatever can, by eroſion or otherwiſe, deſtroy the circulation in the whole or in any part of a bone.

As

As ſuch may be mentioned wounds in general, which affect either the perioſteum or bones; violent contuſions, and inflammation of the perioſteum, from whatever cauſe it may proceed, when it ends either in abſceſs or gangrene: The acrid matter of ulcers penetrating to, and deſtroying the perioſteum; and laſtly, the improper application of ſharp acrid ſpirits and powders to bones merely laid bare, a practice recommended by almoſt all the antient writers on this part of ſurgery.

IT is obſerved above, that loſs of ſubſtance in a bone does not always produce caries; thus, very conſiderable portions of the cranium, it is well known, are frequently taken out when fractured, without any caries of the remaining part of the bone enſuing; and that the ſame circumſtance, likewiſe, happens, in ſome inſtances, in other parts of the body, I have had many opportunities of being convinced of.

THAT ſuch occurrences, however, are not to be met with ſo frequently in other bones as in thoſe of the cranium, cannot be denied; and the reaſon of it, very probably, is, there being a greater

greater proportion of blood-veſſels ſent to the bones of the ſkull than to any of the long ones; whereby, an accident that may be ſufficient for ſeparating one part of a bone from another, will not there ſo readily produce a ſtoppage of circulation in the neighbouring remaining parts, as in the hard bones of the extremities, in which the blood-veſſels are much more ſparingly diſtributed: And to ſuch a ſtoppage we have already endeavoured to ſhew that every caſe of caries is to be attributed.

IN every inſtance of caries, the prognoſis to be formed muſt depend upon a variety of circumſtances, the principal of which are,

THE ſituation of the diſeaſed parts; the nature and organization of the affected bone; the nature and degree of the inflicting cauſe; the ſize of the caries; age and habit of the patient.

THUS it will be readily allowed, that a caries in any of the bones of the ſkull, ribs, or vertebræ, from theſe parts being ſituated above or upon organs, ſo immediately neceſſary for life, muſt

muſt be attended with more riſk, than a diſeaſe, in every other reſpect of the ſame nature, in any of the bones of the extremities.

FOR a ſimilar reaſon too, a caries ſeated near to any of the joints, from the danger of theſe becoming affected, is always attended with more riſk, than when the diſeaſe is confined to the middle of a bone.

THE nature or texture of a bone too, has no ſmall influence in every caſe of caries; exfoliations being much more tedious, in the hard and compact, than in the more ſoft vaſcular bones. Thus, although, as was already remarked, diſorders of this kind are attended with more riſk, on the ſkull than elſewhere, yet a caries when ſituated there, if it is to be cured at all, never proves near ſo tedious as when the hard ſubſtance of the tibia is affected.

THE nature of the cauſe which produced the diſorder, has likewiſe a conſiderable effect in determining the prognoſis. Thus a wound with a ſharp cutting inſtrument, that may have deſtroyed not only ſome of the perioſteum, but even

part

part of the bone itſelf, does not generally produce either ſuch a deep or extenſive caries, as commonly ſucceeds to *violent contuſions* of bones, with perhaps no immediate loſs of ſubſtance.

THE extent of the diſeaſed part too, it was obſerved, likewiſe influences the cure conſiderably. This is no doubt the caſe, in every ſpecies of ulcer, but is more particularly ſo in all caſes of caries; for it is conſtantly found, that much more time *in proportion* is requiſite, for the ſeparation of a large piece of ſpoiled bone, than what in general proves ſufficient for one of a leſs extent.

AND laſtly, as in every ſpecies of ſore, the patient being young or old, healthy or otherwiſe, are circumſtances which occaſion very conſiderable differences in the cure. And it is from a due attention to the ſeveral circumſtances enumerated, that every prognoſis in caſes of carious ulcer ought to be formed.

§ 3. *Of the Cure of the carious Ulcer.*

CARIES being a diſeaſe of the ſame nature in the bones, as mortification is in the ſoft parts, no

cure, it is evident, can with propriety be attempted, till the removal of all ſuch parts as are diſeaſed is accompliſhed.

FOR, if either by accident or deſign, an union of the parts above ſuch a caries ſhould be obtained, the dead portion of the bone not having any connection with the living or ſound parts, would by acting as an extraneous irritating body, ſoon produce an abſceſs or collection of matter, and ſo would force open the parts lately cloſed up.

IN a healthy conſtitution, the ſeparation of diſeaſed mortified parts, from ſuch as remain ſound, is, in general, accompliſhed by a natural exertion of the ſyſtem.

THE courſe which nature falls upon, to effect this, ſeems, as was formerly particularly remarked, when treating of gangrene, to be through the intervention of a ſlight degree of inflammation, excited upon the extremities of the remaining ſound parts, which forms, as it were, a boundary between theſe and ſuch as are diſeaſed.

IN

IN conſequence of ſuch an inflammation, a ſerous exudation from the mouths of the ſound veſſels is produced; a ſuppuration is, accordingly, brought about, with a conſequent production of new granulations, which, together, ſoon effectually detach all the diſeaſed from the living parts.

THIS is evidently the proceſs, in ſuch caſes of mortification, as occur in the ſofter parts of the body, and with a very little attention, the ſame phenomena are obſervable in every caſe of caries. Only in the latter, from there being in the bones, as was formerly remarked, a more ſparing diſtribution of blood-veſſels, and, conſequently, not ſuch a diſpoſition to inflammation, nature does not in them, therefore, get her operation in general *ſo quickly* accompliſhed.

IT is from a due attention to this proceſs, had recourſe to by the ſyſtem for freeing itſelf from ſuch diſorders, that we ought to be directed in making the different applications for a cure; and, indeed, by attending properly to this circumſtance alone, more real advantages are always to be obtained in the treatment of caries, than can ever be got from any other plan. And in this way

way too, we have it frequently in our power to accompliſh in a few weeks, what nature, if left to herſelf, would require many more months to effect.

FROM the foregoing conſiderations, the principal indication, it is evident, in every caſe of caries, ſhould be by proper applications frequently reiterated, to excite, and continue as long as may be neceſſary, ſuch a degree of inflammation in the adjoining ſound parts of the bone, as may be requiſite for the total ſeparation of the mortified parts.

AT this period of the diſorder, the diſeaſed part of the bone, we ſuppoſe to be laid quite bare, which in the caſe of caries, as firſt deſcribed, is from the beginning the caſe, and which muſt in the other be brought about, by deſtroying the corrupted and other parts that cover it, ſo ſoon as the caries from the different ſymptoms is known to exiſt.

So far at leaſt, is neceſſary, to lay it open, as is requiſite for getting freely at the diſeaſe of the bone in its full extent. This by a mere inciſion

along

along the courſe of the caries, may in general be done; but when the diſeaſe extends over any conſiderable ſurface in breadth, it becomes neceſſary, to make a crucial inciſion, or even to take away part of the teguments altogether. And till the diſeaſe of the bone is entirely removed, it is neceſſary by a due attention from time to time, to prevent the formation of new parts, at leaſt, ſo far as might in any degree obſtruct the ſeparation of the caries.

WHETHER authors have ever had in view, ſuch an indication as the one above mentioned, for the cure of caries, I know not; but the means fallen upon in ſuch caſes, to accompliſh a cure, have, in general, been quite contrary to thoſe, which, for ſuch an effect, ought to be purſued; and very much oppoſite to thoſe means now made uſe of by many practitioners with much greater ſucceſs.

THE directions laid down by all the old writers on this ſubject, and which are ſtill continued by ſome of the moderns, are, in every caſe of caries, or even only of a denuded bone, to apply immediately to the bone itſelf, powders and tinctures of

of aloes, euphorbium, myrrh and other warm gums. This, it is probable, they were originally led into, with a view to correct the great degree of fœtor and putrefaction, that in cases of carious bones always take place; and from custom only, the practice has been continued, without any other satisfactory reason, for the only effects such applications ever can have, farther than that of correcting the smell, is to irritate and inflame the soft parts of the sore, without having the least influence on the more material disease of the bone.

FOR, when the caries is of any considerable depth, such substances can never penetrate to, or affect the sound parts of the bone, where alone by the irritation they would occasion, some influence from them might be expected.

AND again, when no caries or affection of that kind has appeared, such applications to bones merely denuded of their periosteum, can never, in any respect, be necessary, and may, on the contrary, be frequently a means of inducing a real caries, the very disorder they were intended to prevent.

ANOTHER

ANOTHER great remedy, recommended by almoſt every author, in the more advanced ſtages of caries eſpecially, is the actual cautery. This, however, independent of the many objections made to it by patients, from the pain and cruelty attending it, is evidently, from its nature, a very injudicious application in all ſuch diſorders; and although many have no doubt recovered when the cautery has been made uſe of, there can be little doubt, but that the ſame complaints would have been ſooner removed, had no ſuch remedy been had recourſe to; for in whatever way we conſider it to be applied, its effects muſt evidently be pernicious.

IF the cautery be applied in ſuch a manner, as entirely to deſtroy the diſeaſed parts of the bone, as is commonly recommended, the ſound parts underneath, from the degree of heat neceſſary for that purpoſe, muſt undoubtedly always ſuffer ſo much, as ſoon to be rendered equally carious with thoſe intended to be removed.

AND, on the contrary, when uſed in a more ſparing manner, the diſeaſed part of the bone will not be removed, at the ſame time, that a very

very great riſk will ſtill be run of retarding the natural exertion of the ſyſtem for the removal of the diſeaſe; for even a ſlight degree of heat will effect the deſtruction of ſuch granulations, as nature may, for that purpoſe, have already formed; and the juſt medium, it may be remarked, neceſſary for deſtroying the morbid, without affecting the ſound parts, is ſcarce poſſible to be determined.

WHEN, for any particular reaſon, the actual cautery might not be judged proper, it has been recommended, by the ſame authors, to make uſe of different artificial cauſtic preparations; and by others, as the ſhorteſt proceſs, to ſtrike off at once all the diſeaſed parts with a chiſel and mallet.

BUT the ſame objections ſtated to the uſe of the cautery, hold equally ſtrong with reſpect to theſe; ſo that in every caſe of caries, all ſuch precarious applications ſhould be entirely laid aſide, and that eſpecially as we have it in our power to accompliſh the ſame indication in a much more ſafe and certain manner.

FOR

FOR the purpoſe of exciting a neceſſary degree of inflammation, the moſt effectual and ſafeſt method, and which, in ſlight caſes of the diſorder, proves always ſufficient, is the making a number of ſmall perforations all over the ſurface of the carious bone, to ſuch a depth as to give the patient a very little pain, and no farther.

THIS operation being, in different parts, renewed every third day or ſo, the diſeaſed portion of the bone, in the courſe of a ſhort time, not only loſes the cohefion of its own parts, but a gentle inflammation being, by the ſame means, raiſed and kept up, till a free ſuppuration is produced, the whole mortified maſs is generally, in a ſhort time thereafter, entirely thrown off.

THESE perforations are very conveniently and effectually made by a pin or perforator, ſuch as is uſed for fixing the head of the trepan, and which being fixed in the handle of that inſtrument, not the one in common uſe, but that which reſembles the tool made uſe of by coopers for perforating caſks, it is thereby wrought with a great deal of eaſe, as well as expedition.

ALTHOUGH the operation, as now deſcribed, in general, anſwers very effectually in ſlight caſes of caries, which are not of great extent, and which do not penetrate deeper than the firſt or ſecond lamella of the bone; yet when the diſeaſe is very extenſive, and eſpecially when it goes deep into the ſubſtance of a bone, it ſhortens the proceſs conſiderably, if, in place of the perforator, a very ſmall head of a trepan is employed.

THIS inſtrument being applied at proper diſtances over the ſurface of the caries, and carried juſt ſo deep as to give the patient a very little pain, as formerly directed, tends conſiderably to the production of that degree of inflammation, which, in all ſuch caſes, we have ſhewn to be ſo neceſſary. And, at the ſame time, by converting, as it were, a very large caries into ſo many ſmaller diſeaſed parts, their ſeparation from the ſound bone below, comes to be much more eaſily effected, than if the whole ſurface had ſtill remained in one continued piece.

So ſoon as any of the parts looſen at the edges, their final ſeparation may be always greatly haſtened, by daily inſinuating below them the end of

of a common ſpatula or levator, ſo as to preſs their edges a very little upwards.

THE head of a common trepan is very often made uſe of for taking out a piece entirely, when bones happen to be carious through the whole courſe of their different lamellæ; but, in that ſtate of the diſeaſe we are now ſpeaking of, it is not ſuppoſed to have got ſuch a length, and conſequently ſuch a practice could not, with propriety, take place.

AFTER the uſe of either of the forementioned inſtruments, the ulcer is to be dreſſed in the common methods; only, ſo long as any of the carious bone remains, the putreſcency and fœtor are commonly ſo conſiderable, that it becomes neceſſary to make ſome applications, merely with a view to the correction of theſe; and this purpoſe is, in general, pretty effectually obtained, by dreſſing the carious bone with lint ſoaked in a ſtrong decoction of Jeſuits bark and walnut tree leaves, the reſt of the ſore being, at the ſame time, dreſſed, as directed for caſes of ſimple ulcer.

So ſoon as the carious parts are all entirely removed, the whole being then in the ſtate of a ſimple purulent ſore, it ought to be treated ſo accordingly; for, although we are particularly directed by the greateſt number of authors, never, in any caſe of caries, or of denuded bone, to make uſe of ointments, or any kind of greaſy application, yet as there was never any juſt reaſon given for ſuch a prohibition, I long ago made trial of applications of that kind in caſes of caries, and no inconvenience ariſing from the practice, I have, ſince that time, been always in the way of applying them, juſt as freely to bones as to other parts.

ON looking into a treatiſe on carious bones, by the late celebrated Dr MONRO, I am happy to find the point in queſtion ſupported by the practice of ſuch an eminent practitioner; who, after ſpeaking of the application of unctuous medicines to bones, not only admits of it as *ſafe*, but recommends the practice as exceedingly *uſeful*; and ſays, "I can now, after a great many trials, aſſure you, that no medicines ſo effectually *prevents the corruption* of bones laid bare, and *aſſiſt* to

to cover them ſo ſoon with fleſh, as ointments *.

WE have hitherto been ſuppoſing, as was already obſerved, that the diſeaſe does not penetrate far into the ſubſtance or body of a bone; but when that happens to be the caſe, ſo that a conſiderable portion, perhaps, of its whole circumference is affected, or, as frequently happens, the diſeaſe extends even round the whole bone, the ſhorteſt proceſs then, is to take out, at once, all the diſeaſed parts, either with the head of a trepan, frequently applied, or by means of a ſmall ſpring-ſaw.

IN many ſituations this may often be eaſily done, particularly in the ſkull, in the bones of the hands and feet, as alſo in thoſe of the legs and arms, when the caries does not run into the necks and heads of the bones, ſo as to affect the joints: In which event, if an anchyloſis does not enſue, or if nature does not, ſome how or other,

* In the ſame ingenious Diſſertation may be ſeen a particular account of the ſeveral ſpecies of caries, with a liſt of authors in different ages, from Hippocrates downwards, that have wrote upon it, with the ſeveral methods of cure propoſed by each. Vid. vol. V. of Edinburgh Medical Eſſays.

other, effect a cure, amputation of the limb muſt always, at laſt, be had recourſe to; the extremities of large bones becoming carious, being one of the many complaints for which art has not, as yet, diſcovered a remedy.

BUT, whenever a caries is confined to the middle of any of the bones of the extremities, excepting, perhaps, in the thigh, where the thickneſs of parts is ſo very conſiderable, amputation of the member ſhould never be adviſed for it; for, with a little patience and attention, if the patient's health is not much weakened, nature may, in general, be ſo far aſſiſted by removing the diſeaſed parts, that a complete cure may, at laſt, be moſt frequently obtained. And in no caſe whatever ought we to deſpair, when the carious part can, with ſafety, be removed; for, however extenſive the diſeaſe may be, if we can properly accompliſh its removal, nature will ſeldom fail on her part, in filling up the vacancy: There being many inſtances to be met with, in different chirurgical publications, of even whole bones being regenerated.

DURING

DURING the treatment of a caries, it muſt be underſtood that the ſame attention is requiſite to the patient's habit of body, diet, and regimen in general, as in other ſpecies of ulcers.

THUS, if he is of a full inflammatory conſtitution, all heating and very nouriſhing diet ſhould be abſtained from; and if, on the contrary, the ſyſtem is low and emaciated, as, from the long continuance of ſuch diſorders, is moſt frequently the caſe, a nouriſhing generous regimen ſhould always be allowed. In ſuch caſes too, as tonic remedies are much wanted, Jeſuits bark is often found very ſerviceable, and ſhould always be had recourſe to in conſiderable quantities.

AFTER the extraction of the carious bone, the ſore which remains is to be treated in the ſame manner as already directed for the management of that ſpecies of ulcer, to which, at the time, it may appear to belong.

SEC-

SECTION VIII.

Obſervations on the cancerous Ulcer.

§ 1. *Of the Symptoms and Diagnoſis of the cancerous Ulcer.*

CANCERS have been generally diſtinguiſhed into occult and open. By the former are meant ſuch hard ſchirrous ſwellings as are attended with frequent ſhooting pains, and which, at laſt, generally terminate in the latter.

BY *open cancerous ulcer*, is underſtood, that ſpecious of ſore, which commonly ſucceeds to hard ſwellings of the glands; although in ſome inſtances, it occurs, without any previous hardneſs. The edges of the ulcer are hard, ragged, and unequal, very painful, and reverſed in different ways, being ſometimes turned upwards and backwards,

backwards, and on other occaſions inwards. The whole ſurface of the ſore is commonly very unequal, in ſome parts there being conſiderable riſings, and in others deep excavations. The diſcharge, for the moſt part, is a thin dark coloured fœtid ichor, and is often poſſeſſed of ſuch a degree of acrimony as to excoriate, and even deſtroy, the neighbouring parts. In the more advanced ſtages of the diſeaſe too, by the eroſion of blood-veſſels which occurs, conſiderable quantities of pure blood are ſometimes diſcharged.

PATIENTS labouring under real cancerous affections, univerſally complain of what they term a *burning* heat over the whole ulcerated ſurface, which, in general, it may be remarked, is the moſt tormenting ſymptom that attends the diſorder; and thoſe ſhooting lancinating pains, which were troubleſome in the more occult ſtate of the complaint, become now a great deal more ſo.

THESE are the moſt frequent ſymptoms which attend an ulcerated cancer, but the appearances of ſuch ſores are ſo various, that it is almoſt impoſſible in any deſcription, to comprehend every one. When two, three, or more, however, of

thoſe enumerated, concur together in the ſame ulcer, we may always be pretty certain of its being of the cancerous kind.

THE ſituation too of ſuch ſores, affords likewiſe ſome aſſiſtance in the diagnoſis; for though cancers do no doubt occur in every part of the body, yet by far the greateſt proportion happen, either *evidently* in the ſubſtance of one or more glands; or in ſuch ſituations, where glands are known to be moſt numerous. Thus there are probably ſix times the number of cancerous affections occur in the lips, and in the breaſts of women, than in all the reſt of the body beſides.

§ 2. *Of the cauſes of cancerous Diſorders.*

A VARIETY of cauſes of cancer, have been mentioned by different authors, and an equal number of remedies have been recommended: But the deficiency we ſtill labour under, in the treatment of the diſeaſe, ſhews evidently that every thing of that kind as yet propoſed, has been more founded in theory alone than in practice and obſervation; for there is no diſeaſe to which the human frame is liable, that has more baffled the

the whole art of phyſic, nor is there any that can be ſo juſtly termed the *opprobrium medicinæ*, as that now under conſideration.

ALTHOUGH a thorough acquaintance with the theory of the diſorder, might probably throw ſome light upon the method of cure; yet as any thing of that nature that has hitherto been offered, or perhaps, as yet diſcovered, ſeems merely ſpeculative and not ſupported by experience, the introduction of any ſuch reaſoning here, could not prove either entertaining or inſtructive. Before going farther, however, it would ſeem to be of conſequence, to examine with accuracy the different opinions of practitioners, with reſpect to cancer being a *general* diſorder of the ſyſtem, or merely a *local affection*.

THIS is a point of the greateſt conſequence in practice; for if it is once eſtabliſhed, that cancers are originally local affections only, no objection could then be made to their cure by extirpation, as at preſent there is by many, who contend, that cancers, in every inſtance, proceed originally from ſome diſorder in the general ſyſtem, and, conſequently, that their removal can never have any

any other effect than to cauſe the diſeaſe again break out in the ſame, or in ſome other part of the body. And this they are much confirmed in, by obſerving the little ſucceſs which commonly attends the extirpation of cancers, the diſorder, as is alledged, generally returning, in by far the greateſt proportion of all that are cut.

IF this argument was founded in fact, it would no doubt merit ſome attention; though even in that caſe it ought not to be conſidered as concluſive againſt the operation, as will hereafter more evidently appear. It will ſoon, however, be demonſtrated, and to many, indeed, is already known, that a much greater proportion than that mentioned, recover and do well after the extirpation of cancers; and it is probably the fault of ſurgeons, or of patients only, who generally delay the operation too long, that even a great many more do not recover, than what, as yet, in ſuch caſes, ever have done.

IT is of the more conſequence to have the point in queſtion determined, as the only accounts of ſucceſs from extirpation, which, till lately, has appeared in this country, gives ſo bad a proſpect of

of recovery, that I make no doubt of its having been the means of deterring many patients from undergoing a timeous operation; and conſequently, of preventing their getting free of cancerous complaints, which no other remedy could poſſibly remove.

IT is very probable too, that the ſame publication, as coming from great authority, has had no inconſiderable influence even with practitioners, in making them much more backward in undertaking the extirpation of cancers, than they otherwiſe, probably, would have been.

THE publication alluded to, is that of the juſtly eſteemed Dr MONRO, in Vol. V. of Edinburgh Medical Eſſays, where the Doctor ſays, "Of "near ſixty cancers which I have been preſent "at the extirpation of, only four patients re- "mained free of the diſeaſe at the end of two "years: Three of theſe lucky people had occult "cancers in the breaſt, and the fourth had an "ulcerated cancer on the lip."

THE Doctor likewiſe obſerves, that of the few he had an opportunity of ſeeing the diſeaſe relapſe

lapſe in, it was always more violent, and made a quicker progreſs, than it did in others on whom no operation had been performed. He therefore propoſes, by way of queſtion, "Whether ought cancerous tumours to be extirpated, or ought the palliative method only to be followed when they cannot be reſolved?" and upon the whole, concludes againſt their extirpation, except in ſuch as are of the occult kind, in young healthy people, and that have been occaſioned by bruiſes or ſome other external cauſes. In all other caſes the Doctor obſerves, it ſhould be the patient's *earneſt entreaty* only, after the danger of a relapſe has been explained, that ſhould make a ſurgeon undertake the operation.

THAT Dr Monro, from obſerving the diſeaſe to return ſo very frequently, ſhould be of this opinion, is not in the leaſt ſurpriſing; and if no better ſucceſs was, in general, to attend the extirpation of cancers, it would no doubt be an objection to the practice; and that eſpecially, if all the caſes which relapſe ſhould be found to be attended with more inveterate and painful ſymptoms, than they either were, previous to the operation, or than they probably ever would have been had

had the extirpation of the tumours not been had recourſe to.

BUT the experience of many practitioners ſince Dr Monro's publication, has proved a great deal more ſucceſsful; and one late publication upon the ſubject, to be afterwards taken notice of, puts it beyond a doubt, that a much greater proportion have recovered from cancers by means of extirpation, than had occurred to the Doctor in the courſe of his experience. It will not, therefore, appear improper, to endeavour at diſcovering the reaſon of the Profeſſor's great want of ſucceſs in ſuch caſes, in compariſon with what others have met with: And this it is preſumed will not be difficult to do.

IT may, I think, be laid down as a certainty, that the ſooner cancerous caſes are operated upon after their appearance, the greater is the chance of the extirpation proving effectual. And *vice verſa*; now it is exceedingly probable, the high rank which Dr Monro bore in his profeſſion, both as an anatomiſt and ſurgeon, would be the means of his being applied to for more bad and old caſes of cancer, as well as of other complaints,

complaints, than perhaps any other practitioner of his time. Patients in the country, with ſlight eaſy caſes of cancer, have them generally taken off by their own ſurgeon; but whenever they become of a more inveterate nature, by long ſtanding or otherwiſe, they always fly to a town; to the capital when they can conveniently do ſo, and there the moſt famed in his profeſſion is naturally had recourſe to. And as Dr Monro was exactly in this ſituation, a great number of ſuch doubtful caſes would moſt probably occur to him; ſo that in ſuch circumſtances it is not ſurpriſing that very little ſucceſs attended the different operations which took place; nor need we wonder at the opinion the Doctor afterwards adopted upon the ſubject.

SUCH unfavourable caſes as thoſe repreſented, it is probable, for the reaſons alledged, would moſt frequently occur to the Doctor in private practice; and in his attendance on the Infirmary, he would, in general, meet with very ſimilar ones. For, in every hoſpital, it is commonly the worſt caſes chiefly that are to be met with; as before application is made there, private ſurgeons are always conſulted, who, when an operation

ration is to take place, if the caſe does not appear deſperate, and if any reputation is to be got from it, ſeldom allow ſuch to proceed farther. And, on the contrary, when the diſeaſe is evidently of an inveterate nature, and an operation to be attended, therefore, with much riſk, a public hoſpital is always recommended: So that no fair judgment, from the reſult of ſuch experience, in cancerous caſes eſpecially, can ever be formed, unleſs, at the ſame time, theſe different circumſtances are properly attended to, and allowed for.

THIS, in my opinion, is the only way in which Dr Monro's great want of ſucceſs in the extirpation of cancers can be accounted for, and it does it, I think, pretty ſatisfactorily: So that all the concluſion which can be drawn from that part of the above mentioned paper, is, that there is *very little* chance of ſucceſs from extirpation in the more advanced ſtates of cancer; a circumſtance which ought, therefore, to make us have recourſe to that operation in the earlieſt ſtages of the diſeaſe, when, in general, there would not, probably, be much chance of its frequently failing.

SUCH expectations will probably, by many, be conſidered as much too ſanguine; and they no doubt would be ſo, if the ſucceſs which *in general* attends the operation, was all that could be attained; but its proving, for the moſt part, ſo unſucceſsful ſhould by no means be imputed either to the nature of the diſeaſe, or to the fault of the remedy, but entirely to its being, in by much the greateſt number of caſes, delayed too long, till the ſyſtem has thereby time to become ſo much infected, that we ſhould rather wonder at the operation ſucceeding ſo frequently, as it is, even in the general run of practice, found to do.

IN confirmation of the opinion we have endeavoured to ſupport, it is not thought improper here to introduce a very ſhort abſtract from a late publication on cancers formerly alluded to, by the late Mr James Hill, an eminent ſurgeon in Dumfries, who, in the courſe of a very extenſive practice, had, amongſt other articles, more experience in cancerous caſes, than often falls to the ſhare of one man: So that to ſuch as have not yet ſeen Mr Hill's book, it will not probably appear ſuperfluous to find here a ſhort abſtract from his obſervations on theſe complaints.

IN

IN the year 1772, the date of this publication, Mr Hill had extirpated from different parts of the body, eighty-eight genuine cancers, which were all ulcerated except four, and all the patients, except two, recovered of the operation.

OF the firſt forty-five caſes, only one proved unſucceſsful; in three more, the cancer broke out again in different parts; and a fifth, was threatned with ſome tumors at a diſtance from the original diſeaſe. Theſe tumors, however, did not appear till three years after the operation, and the woman was carried off by a fever before they had made any progreſs. All the reſt of the forty-five continued ſound as long as they lived, or are ſo, ſays Mr Hill, at this day. One of them ſurvived the operation above thirty years, and fifteen were then alive, although the laſt of them was cured in March 1761.

OF the next thirty-three, one lived only four months; and in five more the cancer broke out afreſh, after having been once healed. The reaſon why out of forty-five caſes, only four or five proved unſucceſsful, and ſix out of thirty-three, was owing to the following circumſtance.

THE

"THE extraordinary success I met with," continues the author, "made cancerous patients flock to me from all corners of the country, several of whom, after *delaying* till there was little probability of a cure by extirpation or any other means, forced me to perform the operation *contrary both to my judgment and inclination.*"

UPON a survey in April 1764, made with a view to publication, the numbers stood thus: Total cured of different ages from eighty downwards, sixty-three; of whom there were then living in all thirty-nine. In twenty-eight of that number the operation had been performed more than two years before, and in eleven it had been done in the course of the last two years.

SO that, upon the whole, after a course of thirty years practice, thirty-nine of sixty-three patients were alive and found; which gives Mr Hill occasion to observe, that the different patients lived as long after the extirpation of the cancers, as according to the bills of mortality they would have done, had they never had any cancers, or undergone any operation.

THE

THE remaining twenty-five, which completes the eighty-eight, were cured ſince the year 1764. Twenty-two of theſe had been cured, at leaſt, two years, and ſome of them, it may be remarked, were ſeventy years, and one ninety years old.

IN the year 1770, the ſum of the whole ſtood thus: Of eighty-eight cancers, extirpated at leaſt two years before; not cured, two; broke out afreſh, nine; threatned with a relapſe, one; in all twelve, which is leſs than a ſeventh part of the whole number. At that time, there were about forty patients alive and found, whoſe cancers had been extirpated above two years before.

I have been the more particular in giving an account of Mr Hill's ſucceſs in cancerous caſes, as it is the lateſt, and perhaps the moſt conſiderable, even in point of number, that the public ever was favoured with; and I was the more readily induced to it, from having been preſent at a conſiderable number of the operations, and from knowing that no fallacy or miſtake could occur in the relation, Mr Hill having been ſo exact, as to keep a regiſter of every caſe of any conſequence that came under his management.

FROM

FROM theſe and many other authenticated facts, which, if neceſſary, might be adduced of the ſucceſs attending the extirpation of cancers, there is, it is preſumed, very great reaſon for conſidering that diſeaſe, in general, as a local complaint, not *originally* connected with any diſorder of the ſyſtem, and that a general cancerous taint ſeldom or perhaps never occurs, but in conſequence of the cancerous virus being abſorbed into the conſtitution, from ſome local affection. This, in every caſe of real cancer, or rather in ſuch ſchirroſities, as from their nature are known generally to terminate in cancer, ſhould certainly determine us to have as early recourſe to extirpation as poſſible; and if this was done ſoon after the appearance of ſuch affections, or before the formation of matter took place, their return, as was already obſerved, would probably be a very rare occurrence.

THE particular nature of the cancerous virus, I do not pretend to know, nor will it perhaps be ever diſcovered; but it is not unreaſonable to ſuppoſe, that external accidents merely, may produce ſuch an effect upon particular parts, as to induce

induce the formation of a matter, even as acrid as that of cancers appears to be.

THUS we have daily inſtances of bad vitiated ſores, producing very acrid, and even corroſive matters, which, from what has been remarked in ſome of the preceding ſections, could not probably have previouſly ſubſiſted in the blood: And, if that is the caſe, why may not *ſome peculiar affection* of a part produce the formation of a *cancerous* matter? The one may, *a priori*, juſt as probably occur as the other, and does, it is apprehended, as certainly happen.

THE ordinary ſituation of cancers too, may, in ſome meaſure, account for the diſcharge afforded by them, being even of a more acrid and virulent nature, than that of any other ſet of ulcers; for, as, in general, they are ſeated in the glands, which are known, even in much more ſimple affections, never to produce good matter, it is not at all improbable, but, by ſome peculiar irritation applied to a gland, ſuch a diſpoſition in it may be induced, as to cauſe the formation of the worſt and moſt inveterate of all matters, *viz.* the cancerous: Which being allowed to remain,

main, and abſorption taking place, the whole ſyſtem comes, in courſe of time, to be, as it were, ſaturated with it, and ſo a general affection, or what may be termed the *cancerous diatheſis* is, at length, produced, from what, at firſt, was only a local ulcer.

WE have thus endeavoured to ſhew, that, by an external accident merely, cancer may be produced, without having recourſe to the ſuppoſition of any internal affection. But ſay thoſe, who aſſert that the latter, in ſuch caſes, always takes place, "Although external violence does ſometimes ſeemingly end in cancer, yet that diſorder would never in ſuch a way be produced, unleſs a prediſpoſition, in the habit, to ſuch complaints, ſubſiſted at the ſame time; and beſides, altho' cancers do, from that circumſtance, on ſome occaſions, ſucceed to external accidents, yet by far the greateſt number of cancerous diſorders occur without the intervention of any ſeeming violence whatever."

THAT this is the caſe will not, by any practitioner, be denied, but it may, however, be explained upon very different principles, from what it

it commonly has been, and in a manner too, that will rather tend to confirm the opinion of cancers proceeding, in general, from a local affection.

IN by much the greateſt number of cancerous caſes, as was already obſerved, the glands appear *evidently* to be the ſeat of the diſeaſe, which renders it probable, that, *in all*, they are the parts originally affected; and that the neighbouring ſoft parts come only to ſuffer in conſequence of their vicinity to theſe; or perhaps, in ſome few caſes, cancerous ulcers may break out in parts not glandular, from the whole ſyſtem being much infected, in conſequence of the long continuance of a cancerous gland in any one part.

THIS being the caſe, we may very eaſily conceive how ſingle glands may frequently become affected, without any *evident* external cauſe intervening; for the circulation being, in the glands, carried on by a ſet of veſſels much more minute than thoſe with which other parts of the body are ſupplied, obſtructions will much more readily and eaſily occur in them than in other parts; and a gland being once obſtructed, the ſtimulus and irritation thereby occaſioned, may, it is pro-

bable, have much the ſame effects, and be attended with the ſame conſequences, as a blow or a bruiſe generally produce.

IN this way too may be accounted for, without having recourſe to any peculiar cancerous diſpoſition in the ſyſtem, all thoſe caſes of cancer that occur from impoſthumes in the breaſts of nurſes, and of lying-in women, as likewiſe thoſe which ſo frequently happen to women about that period at which the menſes leave them; and alſo ſuch as ſometimes ſucceed to fevers and other diſorders, and of which they ſeem, as it were, to be the terminations.

IN all theſe caſes, there is always a determination of blood, or of ſome other fluid to the affected part, which, when it happens to be to the cellular ſubſtance, an abſceſs is produced; when to the pleura, membranes of the eye, or any ſuch parts as from their firmneſs of texture do not favour the extravaſation of fluids, violent inflammations are the conſequence; and, when the ſubſtance of a gland happens to be the part a determination is made to, it being neither, as is found from experience, ſo proper as the cellular membrane,

brane, for the formation of pus, nor from its ſoftneſs ſo ſuſceptible of inflammation as a membrane, an indolent hard ſwelling called ſcirrhus comes merely by the obſtruction and diſtenſion of its different veſſels very naturally to be produced. And, a tumour of this kind having once taken place, it generally remains for ſome time in its original indolent ſtate, till, by increaſe of bulk, or perhaps from external violence, an irritation ſufficient to excite ſome conſiderable degree of inflammation is applied; which, from the nature of the affected part, not being able to produce ſuppuration, generally, at laſt, terminates in what we call *cancer*, as in other ſoft parts of the body it would in gangrene, if not previouſly reſolved or brought to ſuppuration.

THIS objection, therefore, of cancers appearing more frequently without, than with the intervention of any external accident, does not, when properly examined into, appear to be of any conſequence; and from the whole of what has been ſaid, this concluſion I think may be drawn, that cancers, in very few inſtances, perhaps in none, ever ariſe from a general affection of the ſyſtem; but, on the contrary, are at their

their firſt appearance almoſt always local affections only.

SUCH a concluſion, were we better acquainted with the nature of the diſorder, than as yet we are, would, it is probable, appear to be founded in fact. The reaſons for adopting it, appear to be ſtronger than any that have been adduced in ſupport of the contrary opinion; and, at any rate, its being admitted, can never prove ſo detrimental to mankind, as if the contrary opinion was univerſally to prevail: Which having the effect of preventing patients with cancerous diſorders from having recourſe to extirpation, would, ſo long as it prevailed, be always the means of their neglecting the only remedy, which, ſo far as we know, ought ever to be truſted.

WITH reſpect to that circumſtance, taken notice of in the paper lately quoted from Dr Monro, of cancerous diſorders being always more violent and making a quicker progreſs upon returning after extirpation, than in patients on whom no operation had been performed; this may in ſome inſtances be the caſe, but I know, from experience, that it is not always ſo; and although

though it ſhould in reality be found ſo on many occaſions, yet ſtill it is no valid objection to the practice of extirpation; and would appear only to be an additional reaſon for having recourſe to the operation at a more early period of the diſeaſe, than is generally done; ſo that there might be little or no riſk of a return apprehended in any form.

§ 3. *Of the treatment of cancerous Diſorders.*

FROM all that has been hitherto ſaid, it is evident, that very little is to be expected in the treatment of cancerous diſorders from internal medicines: Nor are external applications, farther, than with a view to palliate particular ſymptoms, ever to be depended on.

A great many remedies, both in the line of quackery and otherwiſe, have at different times been recommended to the public as cures for cancer; but none, it is probable, was ever more depended on than *cicuta*, a remedy which, in this country, however, has by no means anſwered expectations.

ITS

ITS failure, indeed, has now proved ſo univerſal that there ſeems little occaſion here to ſay any thing with reſpect to it; I ſhall only juſt obſerve, therefore, that although, in a great number of inſtances, I have known it exhibited with all the attention to its preparation that could poſſibly be given, yet, in *real cancers*, I never knew it, or indeed any other remedy, produce a cure.

IN ſimple caſes of indurated glands, I have frequently, indeed, known the uſe of cicuta attended with very good effects; and in the advanced ſtages of cancer, when exciſion was determined againſt, I have, on different occaſions, ſeen it uſeful, both by relieving pain, and by procuring from the ſores a better and leſs acrid diſcharge than could otherwiſe be obtained. But whenever there is no objection to the extirpation of a cancer, ſo ſoon almoſt as the diſeaſe is diſcovered, that operation ſhould always, as the moſt certain remedy, be immediately had recourſe to.

WITH reſpect to the *mode* of operating in extirpating cancerous affections, very full information may be obtained from the ſeveral ſyſtematic writers on ſurgery; it is not here thought improper,

proper, however, to introduce a few general obſervations on the ſubject; and,

1. THE removal of cancerous diſorders, even in the ſlighteſt and moſt trivial caſes, ſhould be always effected with the ſcalpel, in preference to cauſtic; which, although a practice formerly much recommended by ſome authors, and ſtill in ſome parts adhered to, ought, for very obvious reaſons, to be entirely laid aſide.

THE irritation generally occaſioned by every application of the cauſtic kind, together with the pain and inflammation which commonly enſue, are, in cancerous caſes eſpecially, very ſtrong objections againſt their ever being uſed. Plunket's remedy, which is evidently of a cauſtic nature, and which probably conſiſts chiefly of arſenic, has, no doubt, like every other medical ſecret, been greatly extolled; but it is not probable, if the different caſes it has been uſed in were all fairly examined into, that it would be found ever to have produced any advantages which could not more certainly and ſpeedily have been obtained from the ſcalpel.

2. IN

2. IN whatever part of the body the diſorder is ſituated, every part that has the leaſt appearance of diſeaſe ſhould be always taken off; and if, even in the courſe of after-dreſſings, any cancerous portions may appear to have been left, theſe ſhould alſo be directly extirpated, otherwiſe the diſorder will juſt as certainly return as if no part of it had been removed; and, from want of proper attention to this circumſtance, the want of ſucceſs in this operation, I have no doubt, may, on many occaſions, have ariſen. Even every indurated gland which appears in the neighbourhood of a cancerous ſore, ſhould juſt as certainly be taken away as the ulcer itſelf; for, if allowed to remain, it gives little or no chance for the operation ſucceeding.

WHEN the complaint is ſeated in the breaſt, although perhaps part of the mamma only may be affected, the whole of it ſhould be always taken off; for leaving part of it can never be attended with any advantage, and ſuch parts afterwards prove, as I have often ſeen, very inconvenient to the patient.

ALTHOUGH

ALTHOUGH it is always proper, however, to extirpate every part that is really diſeaſed, none of the external teguments ſhould be ever unneceſſarily deſtroyed, or more of them taken away than is altogether requiſite; for the ſmaller the cicatrix that remains after the part is cured, the leſs will be the conſequent irritation; and perhaps, from that circumſtance, the chance of the diſeaſe returning, may be, in ſome meaſure, leſſened.

AT leaſt, in the Infirmary here, there has of late years much greater ſucceſs attended the extirpation of cancerous lips, than was ever formerly experienced; and the only *evident reaſon* for it, is, that during that period the greateſt number of ſuch caſes have been cut and cured in the *hare-lip* way. Whereby, not only a very narrow cicatrix is left, but the deformity attending it is very inconſiderable; and another very comfortable circumſtance to the patient, is, that he can always retain his ſpittle, or any other liquid, juſt as well as before the operation, which never can be the caſe, when any conſiderable portion of the under lip has been extirpated in the ordinary manner.

IT is proper here to obſerve too, that very extenſive cancers in theſe parts admit of being treated in this manner; for the lip being compoſed of parts which yield very conſiderably, it cannot, but from experience, be imagined, how far they will be brought to ſtretch. I have ſeen ſome inſtances of more than one half of the whole under lip being taken off, and the remaining parts ſtretch ſo far as to be cured in the hare-lip form, and with very little deformity being produced. And, in the ſame manner, in cancers of the mamma, when the external teguments are not wholly diſeaſed, ſo much of them may, in general, be preſerved, as by the aſſiſtance of a proper uniting bandage, may be got to cover a great part of the wound occaſioned by the operation; a circumſtance which always renders the cure both more quick and certain than it otherwiſe would be.

3. AFTER all the cancerous parts have been removed, if the hare-lip method has not been followed, the remaining wound ſhould be dreſſed in the uſual manner with dry lint; and when, by a free ſuppuration coming on the dreſſings fall off, the ſore being then in a ſtate exactly ſimilar

ſimilar to a ſimple ulcer from any other cauſe, is to be treated accordingly, and a cure to be promoted as quickly as poſſible.

4. BUT ſome little time before the ſore heals up, an iſſue ſhould be introduced, ſo as that it may come to diſcharge freely, before the cicatrix is quite formed. This, when the complaint has been of long ſtanding, is particularly requiſite; as alſo, when it ſeems to have been occaſioned by any particular determination, in conſequence of a redundancy of fluids in the ſyſtem, either from ſuppreſſed menſes, or from any other cauſe. And in this way I have no doubt but an iſſue may be, and frequently has been, a means of preventing the return of cancers after extirpation.

IT has ſometimes been adviſed, as the beſt method of introducing ſuch a drain, to keep the part open from whence a cancerous tumour has been extirpated. I ſhould ſtrongly ſuſpect, however, that the irritation produced by an iſſue, directly upon the old ſeat of a cancer, might ſometimes do miſchief; and as all the advantages attending the practice are probably to be obtained

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from an iſſue on whatever part it is ſituated, I would, therefore, always adviſe the ſore itſelf to be immediately healed up, and an iſſue to be introduced in the manner directed in ſome other convenient ſituation. After cancers of the breaſt, it has been a frequent practice in the Royal Infirmary here, to put a ſeton into the ſide, near to the original ſeat of the diſorder; and as it has been thought to produce conſiderable advantages, and the ſide being, for ſuch a drain, perhaps as convenient a ſituation as any, it may, therefore, be always preferred.

THESE are the different circumſtances, in general, to be attended to in the extirpation of cancers; and, as from what has already been ſaid, the removal of the diſeaſed parts ſeems to be the *only effectual reſource* in every caſe of cancer, there are very few circumſtances only, which ſhould ever prevent its being put in practice. And theſe, in general, are,

1. WHEN, by a long continuance of the diſorder, cancerous ulcers, and ſcirrhous glands have appeared in ſeveral different parts of the body, the removal of one, or even all of theſe, as

as it would not, probably, prove effectual; ſo, in ſuch circumſtances, the operation, it is preſumed, ſhould never be had recourſe to.

2. WHEN the cancer adheres ſo firmly to the parts beneath, that the whole of it cannot be removed, at the ſame time that it might be dangerous to extirpate along with it any ſuch parts as it is connected with; extirpation, in that ſituation, can never, with propriety, be had recourſe to. Thus, cancers adhering to the *Trachea Arteria*, or to the coats of a large artery, can never, without the greateſt riſk, be extirpated.

ONE inſtance of the raſhneſs of a ſurgeon, in attempting an operation in ſuch circumſtances, and attended with immediate fatal effects, came within my own knowledge. A large ſcirrhous tumour ſeated upon, and lying immediately contiguous to the fœmoral artery, and ſo high in the thigh, that a tourniquet could not be applied, was attempted to be cut out; but the artery being opened in the courſe of the operation, the patient died among the ſurgeon's hands.

CANCERS,

CANCERS, however, being merely attached to the circumjacent muſcles or tendons, ſhould never altogether debar their extirpation, as conſiderable portions of theſe, it is well known, may, without much inconvenience, be taken along with them. Large portions of the pectoral muſcles, I have, on many occaſions, known taken away with cancers of the mamma, and the patients afterwards recover and do well.

THERE is a paper upon cancers by the celebrated Monſieur le Cat of Rouen, inſerted in the firſt volume of Memoirs of the Academy of Surgery at Paris; in which, the author is clearly of opinion, that extirpation is the only remedy to be depended on; and adviſes it to be had recourſe to in the moſt deſperate caſes. On the point we are now ſpeaking of, he goes a much greater length than I can actually, from experience, recommend; although, independent of the authority of ſuch a reſpectable author, and of the caſes he inſtances of the ſucceſs of ſuch practice, I could not have the leaſt doubt of its being preferable to go even the length he recommends, than to allow a patient with a cancer to ſit down with a certain proſpect of dying in miſery,

ſery, before having made trial of the only remedy in the power of art to furniſh. For, however fixed a cancerous tumour may appear, if the parts to which it adheres, can, without much danger, be removed; and, if the caſe is otherwiſe favourable, the operation ought, undoubtedly, to be always adviſed *.

3. AN operation can never be adviſeable, when the diſeaſed organ lies either altogether, or in part, out of the way of operation; as is the caſe in cancers of the uterus, of the liver, rectum, *&c.*

WHEN, from the exiſtence of one or all of theſe cauſes, a cancer cannot, with propriety, be extirpated, the next conſideration is, to palliate the different ſymptoms, ſo that the diſeaſe may be rendered as tolerable to the patient as poſſible.

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* Upon this ſubject M. le Cat expreſſes himſelf thus; "L'adherence d'un cancer *aux muſcles pectoraux*, *aux cotes meme*, ne fera pas un excuſe valable, ſi *ces muſcles*, ſi *ces attaches* de la tumeur aux cotes peuvent etre emportes, de facon qu'il ne reſte, que de ſain au-dela." Loco citato.

As for this purpoſe, the great object to be had in view, is the abatement or prevention of pain, nothing ſhould be either exhibited internally, or applied externally, that can have the leaſt effect in raiſing irritation or inflammation. So that, for diet the lighteſt vegetables and milk ſhould be preferred to every thing elſe; no animal food ſhould be allowed, nor ſpirits, wine, or any fermented liquors; all violent exerciſe, and whatever, in ſhort, can heat, or, as is termed, inflame the blood, ſhould be carefully avoided.

THE fœtor attending cancerous ulcers being commonly very diſagreeable, and the matter afforded uſually very thin and acrid, it becomes always a circumſtance of conſequence to get theſe appearances changed, and a diſcharge of a better nature induced. In this view, hemlock frequently proves ſerviceable, both as an internal medicine, and as an external application. For internal uſe, there are two different forms of the remedy commonly kept, the powder and the extract; but as the former, when properly prepared, ſeems to poſſeſs all the virtues of the latter, and as it is not liable to ſo many caſualities in the preparation, it ſhould, for that reaſon, be

be in general preferred. The ſize of the doſe, and number of repetitions, can never be determined but by trial; ſome patients being able to bear three times the quantity that can be admitted by others; ſo that this circumſtance muſt always be regulated by the ſtrength of the patient, and by the ſtate of the ſtomach at the time.

When recent hemlock can be procured, a quantity of the juice being mixed with the common emollient poultice, makes a very convenient and effectual application for cancerous ſores; and, in the winter ſeaſon, when the juice cannot be obtained, the dry powder made into a poultice in the ſame manner, anſwers the purpoſe tolerably well.

The external uſe of cicuta proves generally more expeditious than its internal exhibition, in procuring a diſcharge of good matter; and, in this reſpect, it commonly proves more effectual too than even the carrot poultice, ſo much recommended for that purpoſe in different kinds of ſores.

A good diſcharge being once obtained, the common unguentum cereum is the mildeſt and moſt ſimple application that can be uſed; with it the parts ſhould be dreſſed more or leſs frequently, as the diſcharge is more or leſs copious: But at each time of changing, the greateſt care ſhould be had to its being done quickly, ſo as to prevent as much as poſſible the action of the air, which, in every ulcer, but more eſpecially in the cancerous, always produces diſagreeable effects, both in occaſioning irritation, and in vitiating the nature of the diſcharge.

THE violent ſhooting pains, which prove always ſo tormenting in cancerous caſes, are frequently moderated by a continued uſe of cicuta; but when it fails in that effect, it becomes neceſſary to have recourſe to opiates in large doſes, and theſe to be repeated at ſuch intervals, as the violence and returns of the pain may indicate. Theſe pains too are ſometimes relieved by the uſe of warm emollient fomentations.

BY a proper attention to the different circumſtances taken notice of, particularly to the preſervation of a well-conditioned diſcharge, and by

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a well-timed uſe of opiates, very bad caſes of cancer may be ſometimes ſo far palliated, as to render them, in ſome meaſure, tolerable; though never to ſuch a degree as to prevent the ſufferers from regretting daily their not having, in due time, had recourſe to the only effectual remedy, *Extirpation.*

SECTION IX.

Obſervations on the cutaneous Ulcer.

§ 1. *General Remarks on cutaneous Affections.*

THERE are no ſet of complaints whatever, leſs underſtood by practitioners, than the different diſorders to which the ſkin is liable. This, indeed, is, in ſome meaſure the caſe, both with reſpect to ſuch as are attended with fever, and thoſe that are not; it is, however, more eſpecially ſo with the latter, which only are to be here taken notice of; thoſe of the *exanthematous*

tous kind, as they are termed, belonging more properly to the province of medicine.

THE appearances of ſuch complaints are ſo various, and the deſcriptions given of them, by different authors, ſo confuſed and intricate, that it is ſcarce poſſible, from all the ſeveral writings on the ſubject, to collect any thing ſatisfactory. By different writers, different names have been given to the ſame ſet of ſymptoms; many complaints of this kind are enumerated by old writers, which are now never to be met with; and diſeaſes of a ſimilar nature, though ſtill, in ſome reſpects, different, have been regularly deſcribed by modern authors, which do not appear, in antient times, to have been at all known. It is much to be wiſhed, therefore, that, by ſome able practitioner, a thorough inveſtigation of the ſubject was attempted, as there does not appear any part of the practice of medicine, that we are more deficient in than this; and that not only with reſpect to the hiſtory and theory of theſe diſorders, but even in regard to the method of treatment.

To give a particular detail of all the varieties of ſuch complaints, would of itſelf require a pretty extenſive volume, and would alſo be entirely foreign to the intention of the preſent Diſſertation; all that is here propoſed, being to give a few general obſervations upon ſuch eruptions of this kind, as, when neglected or improperly treated, are apt to give riſe to troubleſome ulcers.

A great many complaints of the eruptive kind have, by different authors, been deſcribed under the term Herpes, from their being very apt to ſpread or to creep, as it were, from one part to another; and by this appellation have been diſtinguiſhed, by late writers, ſeveral diſorders, which though not entirely the ſame, yet bear a conſiderable reſemblance to the *lepra* of the Greeks, and to the ſeveral ſpecies of *impetigo* enumerated by Celſus. As none of theſe, however, are now in their true form ever to be met with, at leaſt in theſe climates, it is not here neceſſary to enter into a particular enumeration of them, and the more eſpecially, as very minute deſcriptions of them can be had from many of the old writers,

writers, and nothing new, it is probable, can now be offered on the subject.

§ 2. *Of the different species of Herpes.*

THERE have commonly been comprehended, it was remarked, under the term Herpes, a variety of eruptive disorders, but many of the distinctions in these, are taken from very trivial circumstances, and such as do not, in any respect, influence the treatment; and on examination, it will be found, that all the varieties of consequence, may be comprehended in the four following species, viz. *The Herpes Farinosus*, *Pustulosus*, *Miliaris*, and *Exedens*.

The first of these, *viz.* the *herpes farinosus*, or what may be termed the *dry tetter*, is the most simple both in its nature and treatment, of all the several species. It appears indiscriminately in different parts of the body, but most commonly on the face, neck, arms and wrists, in pretty broad spots of exceeding small red pimples. These are generally very itchy, though not otherwise troublesome, and after continuing a certain time, they at last fall off in the form of a white powder, similar *to fine bran;* leaving the skin below perfectly

fectly found, and again returning in the form of a red efflorescence, fall off and renew as before.

THE second species of the disorder, *viz. the herpes pustulosus*, appears in the form of pustules, which originally are separate and distinct, but which afterwards run together in clusters. At first they seem to contain nothing but a thin watery serum, which afterwards turns yellow, and exuding over the whole surface of the part affected, at last dries into a thick crust or scab: When this falls off, the skin below frequently appears entire, with only a slight degree of redness on its surface; but on some occasions, when the matter has probably been more acrid, upon the scab falling of, the skin is found gently excoriated. Eruptions off this kind, appear most frequently on the face, behind the ears, and on other parts of the head; and occur most commonly in children.

THE third species of herpes, *viz.* the *miliaris*, breaks out indiscriminately over the whole body, but more frequently about the loins, breast, perineum, scrotum and inguina, than in other parts. It generally appears in clusters, though sometimes in

in diſtinct rings or circles, of very minute ſmall pimples, which, from their reſemblance to the millet ſeed, has given riſe to the denomination of the ſpecies: The pimples are, at firſt, though ſmall, perfectly ſeparate, and contain nothing but a clear lymph, which, in the courſe of the diſeaſe, is excreted upon the ſurface, and there forms into ſmall diſtinct ſcales; theſe at laſt fall off, and leave a conſiderable degree of inflammation below, that ſtill continues to exude freſh matter, which likewiſe forms into cakes, and ſo falls off as before.

THE itching in this ſpecies of the complaint, is always very troubleſome, and the matter diſcharged from the pimples, is ſo tough and viſcid, that every thing applied to the part, adheres in ſuch a manner, as to occaſion a great deal of trouble and uneaſineſs to the patient, on its being removed.

THE different ſpecies of herpes, are commonly in England, diſtinguiſhed by the names of tetter, ſhingles and ringworm; but the laſt is moſt frequently applied to this ſpecies of the diſorder.

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THE *herpes exedens*, ſo called, from its deſtroying or corroding the parts which it attacks, at firſt, generally appears, in the form of ſeveral ſmall ulcerations, all collected into larger ſpots of different ſizes and of various figures, with always more or leſs of an eryſipelatous like inflammation. Theſe ulcerations, diſcharge large quantities of a thin, ſharp, ſerous matter, which ſometimes forms into ſmall cruſts, that in a ſhort time fall off; but moſt frequently the diſcharge is ſo thin and acrid, as to ſpread along the neighbouring parts, and there to produce the ſame kind of ſores.

THOUGH theſe excoriations or ulcers, do not, in general, proceed farther than the cutis vera, yet ſometimes the diſcharge is ſo very penetrating and corroſive, as to deſtroy the ſkin, cellular ſubſtance, and, on ſome occaſions, the muſcles themſelves. It is this ſpecies of the diſorder, which ſhould properly be termed the *depaſcent* or *phagadenic ulcer*, from the great deſtruction of parts which it very frequently occaſions; but by a piece of very great impropriety, ulcers of the herpetic kind have moſt commonly been conſidered as connected with ſcurvy, and have, there-

fore, by practitioners in general, been uſually diſtinguiſhed by the appellation of ſcorbutic. Whereas, there is nothing more certain, than that herpes is a complaint which is generally, if not always, connected with that ſtate of the ſyſtem, probably the moſt oppoſite of any, to that which takes place in true ſcurvy, I mean the plethoric and inflammatory; whereas in ſcurvy, a high degree of putreſcency is well known to conſtitute the very exiſtence of the diſeaſe.

AND beſides, the real ſcorbutic ulcer, hereafter to be deſcribed, exhibits appearances perfectly different from the diſorder now under conſideration; inſomuch that there is ſcarcely a poſſibility of miſtaking the one for the other; and the remedies neceſſary in the two diſeaſes are juſt as oppoſite as their ſeveral ſymptoms and appearances are different.

THIS ſpecies of herpes, at times, appears in every part of the body, but moſt frequently about the loins, where it often ſpreads to ſuch a degree as to ſurround the whole circumference of the waiſt. It ſeems to be eaſily communicated by contagion, that is, by the application of the virus, either

either through the intervention of cloaths, ſpoons, or other table utenſils. This is indeed the caſe, in ſome degree, with every ſpecies of herpes; I have known inſtances even of the firſt or dry ſpecies of the diſorder proving ſo, which would not *a priori* be ſo readily ſuſpected.

§ 3. *Of the Cure of the cutaneous Ulcer.*

IT was already remarked that, in the deſcriptions given of theſe diſorders, there is very little accuracy to be met with amongſt authors; the ſame confuſion and uncertainty likewiſe occurs in the method of cure.

IT was never, till lately, doubted, that eruptive diſeaſes of this nature could ever appear but in conſequence of ſome general morbid affection of the ſyſtem; and accordingly, a great variety of internal remedies have been recommended by almoſt every author who has wrote upon the ſubject. It has even been commonly conſidered as an unſafe and dangerous practice, to attempt the cure of ſuch eruptions, in any other way than by correcting the original diſorder of the fluids which at firſt was ſuppoſed to produce them.

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IT is ſomewhat ſingular, however, that the opinion ſhould ſo long have remained uncontroverted by regular practitioners, as, from the writings of many old authors, it appears, that theſe ſort of complaints were conſtantly and eaſily cured, as they ſtill are, by every itinerant practitioner, with local external applications only.

THIS, we ſhould imagine, ought very ſoon to have overturned the general notion which prevailed with reſpect to the nature of theſe diſorders, and which ſeemed all along to have no other foundation than antiquity for its ſupport. Modern practitioners, however, not being ſhackled down by ſuch authority, have, in many inſtances, ventured to diſpute, and boldly to deviate from the opinions of their forefathers; and the improvements which have univerſally enſued from ſuch a free ſpirit of inquiry, have never yet given them reaſon to repent their having done ſo.

THIS, in no circumſtance, has been more remarkable, nor attended with better effects, than in the treatment of cutaneous diſorders, which, from having been a perplexed intricate affair, will

will ſoon, it is hoped, become a very ſimple and eaſy branch of the practitioner's employment.

INSTEAD of the very tedious debilitating courſes of medicines, which patients uſed formerly, and perhaps too frequently ſtill are, in all ſuch diſorders, obliged to undergo, it is now found, that the greateſt number of theſe complaints are much more certainly and ſpeedily removed by the uſe of local remedies merely, than they ever are by a contrary courſe. This, probably, is one reaſon, amongſt others, for all complaints of this nature being claſſed among local diſorders, in the *Genera Morborum* of our juſtly celebrated profeſſor Dr CULLEN; and which, without any other ſanction, would, of itſelf, be ſufficient authority for their being here inſerted among ſuch affections *.

THAT internal remedies may ſometimes be of uſe, and even neceſſary, in many inſtances of cutaneous eruptions, will not, probably, ever be doubted; but that they ever prove ſerviceable in the way commonly imagined, *viz.* by correcting

* The character given by Dr Cullen of the claſs Locales, is, "Partis, non totius corporis, affectio." Vid. Synop. Noſolog. Method. Edinburgi.

ting particular kinds of acrimony, ſuppoſed to exiſt in the maſs of fluids, does not appear in the leaſt probable: Nor do ſuch internal remedies, being ſometimes ſerviceable, prove any thing againſt the opinion of theſe cutaneous affections being, in general, only local diſorders.

THUS, in many diſeaſes of the ſkin, antimonials are frequently exhibited with conſiderable advantage; but the principal advantages attending them ſeem to depend entirely upon their producing a determination to the ſkin, and keeping up a free diſcharge of the matter of perſpiration; which frequently, from want of cleanlineſs, and ſometimes from other cauſes, being long retained on the ſurface of the body, and there turning acrid, may often, it is probable, give riſe to many of our cutaneous affections: And accordingly we find, that all ſuch remedies prove conſtantly more or leſs effectual, according as they are more or leſs powerful, in keeping up a free perſpiration.

THIS, however, ſay thoſe who contend for an acrimony of the fluids being the moſt common origin of ſuch diſorders, is an evident proof of our

our doctrine; these antimonials, and other diaphoretic medicines, no doubt, prove, in such cases, very serviceable, but it is entirely in consequence of their evacuating or carrying off the morbid matter, with which the fluids, in these disorders, always abound.

MANY arguments, however, occur against the probability of this opinion; but nothing farther seems necessary for its refutation, than to require of those who advance it, to shew how such matters, if they really existed in the system, should be more readily evacuated by these sudorifics than the other parts of the blood, with which they must, in the course of the circulation, be intimately mixed; and in what manner such medicines should search out the morbid, and leave behind only such fluids as are perfecty sound and free from any taint of the disorder?

THE opinion in question, does not appear so consistent as to require any farther refutation; but what puts it beyond a doubt that all such medicines act entirely in consequence of preserving a free perspiration, and not by evacuating any fluids *particularly morbid*, is, that the very same

ſame effects, in all ſuch complaints, are frequently to be obtained, merely by the uſe of repeated warm bathing, with a due attention to the other articles of cleanlineſs.

FROM this view of the theory of ſuch complaints, many circumſtances with reſpect to them can be much more clearly accounted for, than on any other ſuppoſition: Of theſe, however, we cannot here enter into a full conſideration, and ſhall only obſerve, that by it may be explained the reaſon of ſuch eruptions appearing very frequently in a partial way only, as they often do, by breaking out in a ſingle ſpot, without affecting any other part of the ſurface. This we cannot ſuppoſe would frequently occur, if theſe diſorders always proceeded from a general affection of the ſyſtem; but it may very readily happen from a local ſtoppage of perſpiration, occaſioned by the application of ſuch cauſes to particular parts as we know to be generally followed with that effect. And upon this principle, as was already remarked, is accounted for, much more obviouſly, the operation of the ſeveral remedies than on any other.

IN the treatment of every diſorder of this kind, the firſt and principal circumſtance to be attended to, is, that not only the parts affected, but even the whole ſurface of the body be kept as *clean and perſpirable* as poſſible; for which purpoſe, nothing is of ſo much conſequence as the frequent uſe of warm bathing, together with gentle frictions with clean linen cloths, which, in the dry ſpecies of the complaint, may be applied over even the diſeaſed parts; but in the others, eſpecially where conſiderable ulcerations occur, the frictions can only be applied to ſuch parts of the body as are not, at the time, affected. When due attention is paid to this article of cleanlineſs, few or no internal remedies are ever neceſſary in the ſlighter ſpecies of herpes.

IN the way of external applications, both in the mild and in the more inveterate ſpecies of theſe diſorders, the ſeveral drying and aſtringent remedies are moſt to be depended on: Of theſe, the moſt ſimple of all, is lime water, which, in ſlight caſes of dry tetter, often anſwers the purpoſe, but it ſeldom proves effectual in any of the others.

THE different ſolutions of lead in the vegetable acid, prove often, in affections of this nature, very effectual; and of theſe the watery ſolution of *ſacharum Saturni*, as directed in the treatiſe on inflammation, is always moſt to be depended on*. It may either be applied in the form of cataplaſms, or on ſoft linen rags laid directly upon the parts. The latter is perhaps the moſt convenient method, and in theſe diſorders, from its being more cleanly than poultices, it ſhould therefore be preferred.

ALTHOUGH this, in general, is found to be a very uſeful application in theſe diſorders, yet, in ſome particular caſes, which have ſhewn a great degree of inveteracy, I have ſometimes thought that weak ſolutions of corroſive ſublimate in water, have proved more beneficial. About ten grains of the former, to a pound of the latter, makes, for all ſuch affections, a very eaſy and efficacious waſh.

DECOCTIONS of the different kinds of boles, and of the aſtringent earths, are ſometimes too uſed with advantage in ſlight caſes of this kind; but, in general, the preparations of lead, as above directed,

* See page 41.

directed, with the watery ſolution of corroſive ſublimate, prove a great deal more effectual, and do indeed, in a great meaſure, render every other application unneceſſary.

OINTMENTS prepared with *ſacharum Saturni*, and corroſive ſublimate, have frequently too, in theſe diſorders, been uſed with advantage; but as in ſuch forms, they muſt neceſſarily be combined with unctuous ſubſtances, they cannot of courſe prove ſo cleanly as the watery ſolutions of the remedies; and as they cannot in that way prove in any reſpect more efficacious, they ought never therefore to be preferred.

BY proper attention to the different circumſtances taken notice of, many of the milder complaints of the herpetic kind are often got the better of; but when the diſorder is of a more inveterate nature, is of long ſtanding, and eſpecially when accuſtomed to diſcharge large quantities of matter, as in the *herpes exedens* frequently happens, other remedies come likewiſe to be neceſſary.

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THE more obſtinate and virulent ſuch complaints are, the greater attention becomes requiſite to the promotion of a free diſcharge by the ſkin; for which purpoſe, together with warm bathing, as formerly recommended, plenty of warm diluent drinks ſhould be allowed. New raw whey anſwers in this view very well, and is likewiſe of uſe as a gentle laxative. Decoctions of Sarſaparilla and of Mezerion, both ſeparately and combined, have, in different forms, been recommended for the ſame purpoſe; although I have known them uſed, however, in a variety of caſes, I cannot ſay they ever ſeemed to produce any ſuperior advantages to the common decoctum lignorum of the ſhops, which, when properly exhibited, proves always a very powerful diaphoretic. And when, at any time, it might be of ſervice to have its effects in this way rendered ſtill more conſiderable, it may commonly be done, by adding to each cup-full of the decoction, fifteen or twenty drops of tincture of Antimony.

WHEN, in this manner, two or three pounds of the remedy is taken at proper intervals, every twenty-four hours, it ſeldom fails of keeping up a very free perſpiration.

As

As a gentle diaphoretic too, I have often known of uſe, *Antimonium crudum preparatum*, given to the quantity of two drachms or ſo in the day, either in powder or in the form of an electuary: It commonly anſwers tolerably well by itſelf; but when conjoined with a ſmall proportion of gum Guaiac, it ſeems not only to prove more certainly ſudorific; but more readily goes off by ſtool, which, in ſome caſes, renders their combination of ſervice.

IN patients of plethoric habits, in whom complaints of this nature frequently occur, laxatives are often of uſe; and as ſuch, thoſe of the cooling kind only ſhould be uſed: Sea-water is in this way very commonly preſcribed in theſe diſorders, and frequently anſwers exceedingly well. To many patients, however, ſalt-water proves ſo nauſeous and diſagreeable, that it cannot be exhibited in proper quantities: When that is the caſe, cream of Tartar, which is a much more agreeable medicine, may be uſed inſtead of it, and as it cannot be conveniently given in ſolution, on account of the large proportion of water neceſſary for diſſolving it, the moſt commodious way of uſing it, is in the form of an electuary; ſix or eight

eight drachms of the remedy in powder, with an equal quantity of ſugar, being made into the conſiſtence of a linctus, or of an electuary, with the mucilage of gum Arabic, makes an eaſy doſe of a very agreeable laxative.

TOGETHER with theſe internal remedies, an iſſue, in the more inveterate ſpecies of herpes, becomes always neceſſary, and ſhould in all ſuch caſes, indeed, be among the firſt articles preſcribed; for it is here, as with every ulcer of long ſtanding, where the conſtitution has been accuſtomed by ſuch drains, to throw off conſiderable quantities of ſuperfluous fluids, by firſt eſtabliſhing a proper outlet for theſe, the cure of the diſorder, is not only rendered much more eaſy, but in reality more certain; for when a cure is effected, without that precaution being attended to, the ſores are very apt ſoon to break out again.

IN different eruptions of this kind, eſpecially in the herpes exedens, very conſiderable degrees of inflammation often occur; for the removal of which, warm poultices and fomentations, are generally had recourſe to, but ſeldom or never with any

any advantage; and in no case whatever, does the superiority of saturnine applications, over the whole tribe of emollients in inflammatory affections, appear more evident than in this. For, the latter almost constantly seem to farther the spreading of the secreted acrid humour, and so, instead of removing inflammation, in such instances rather tend to promote it: Whereas, the different saturnine applications, appear not only to correct the acrimony of such humours, but tend greatly from that circumstance to prevent their spreading so far as they otherwise would do.

IN all superficial ulcerations of the herpetic kind, the saturnine and sublimate solutions, as already recommended, in general prove effectual; but whenever the ulcers have penetrated deep into the substance of the muscles and other parts, as they frequently enough do, an ointment prepared with calcined Zinc, I have sometimes found answer better; about two drachms of Zinc in fine powder, to six drachms of Axunge seems to be in general a proper proportion. It lessens the inflammation which commonly takes place, and has often a considerable effect in changing to a purulent

purulent nature, the diſcharge which is commonly very thin and acrid.

THE *unguentum ſaturninum* of the different diſpenſatories, is alſo, when newly prepared, a very proper application for the ſame purpoſe: It ought never, however, to be made uſe of after being long kept, as the lead ſeems thereby not only to loſe its activity, which it in ſome meaſure in unctuous preparations always does, but that ointment, probably from its being prepared chiefly of Axunge, or of wax and oil without any addition of the antiſeptic gums and reſins, is much more apt to turn rancid than almoſt any other ointment in common uſe.

IN ſuch caſes too, an ointment prepared with Axunge and *Mercurius precipitatus albus*, I have ſometimes known of uſe, but as it commonly occaſions a good deal of pain and irritation it is not in every caſe admiſſible.

BY a due continuance of the ſeveral remedies pointed out, whilſt proper attention, is, at the ſame time, given to cleanlineſs, the moſt troubleſome ſpecies of herpes, will, *in general*, be entirely

ly got the better of: But in ſome inſtances, notwithſtanding the uſe of all theſe, and of every other ordinary remedy, complaints of this nature ſtill continue obſtinate, do not ſeem to yield in the leaſt, and frequently even turn more inveterate.

IN ſuch caſes, there is generally great reaſon for ſuſpecting ſome other diſeaſe to ſubſiſt at the ſame time, which, on enquiry, is frequently found to be of the venereal kind; herpes very often appearing as a ſymptom of that diſeaſe: This, however, may commonly be known from the hiſtory of the complaint, and likewiſe from the ſituation of the eruptions; for all eruptions of this kind, which appear in Lues Venerea, are conſtantly above ſome of the hard thin covered bones, as thoſe of the cranium, ſternum and tibia; at leaſt, in the beginning of the diſorder, theſe are the parts chiefly affected; though, no doubt, in its more advanced ſtages, the whole ſurface comes to be more or leſs affected.

So ſoon as the complaint is diſcovered to be of the venereal kind, its cure muſt depend, in a great meaſure, upon the general treatment neceſ-

ſary in that diſorder; ſo that by a proper uſe of mercury, with a continuance of the different remedies already enumerated for herpes, all affections of that nature, may, in due time, be expected to be got eradicated.

ON other occaſions, again, and when there is no cauſe for ſuſpecting a venereal taint, it ſometimes happens, that even the ſlighteſt ſpecies of *tetter* reſiſts all the common remedies, both internal and external, and perhaps too becomes more inveterate. In ſuch caſes, there is frequently conjoined with the diſorder now under conſideration, the common ſcabies or itch; and when it happens to be ſo, as I have ſometimes ſeen, a very diſagreeable and troubleſome diſeaſe comes to be produced; what may be conſidered as a *tertium quid*, or a production of the two, which, in its appearance, is exceedingly lothſome; little leſs ſo, indeed, than the deſcriptions given of the Lepra of the antients; and when allowed to remain long, it proves ſometimes almoſt as inveterate.

THE itch being ſuch a well known diſorder, its conjunction with herpes, is commonly very eaſily

ſily detected, and when once it is known to take place, the cure muſt conſiſt in the ſeveral remedies already recommended for herpes, together with ſuch as are more particularly active in the cure of ſcabies; and of which, though there are great varieties recommended by authors, yet none ever prove ſo certainly efficacious as ſulphur. Mercury too, does, no doubt, often cure ſuch complaints, as it does, indeed, the itch in all its ſtages, yet as it fails in many inſtances, which ſulphur, when properly directed, very ſeldom does, the latter ſhould, in general, be preferred.

WHEN, however, in ſuch caſes, it may for ſome reaſon or other be thought proper to make uſe of mercury, an ointment ſimilar to what in the diſpenſatories is termed *unguentum Citrinum*, has, on many occaſions, been found to anſwer exceedingly well: but as that ointment has commonly been ordered with too great a proportion of mercury, it frequently acts as a cauſtic, and occaſions a good deal of irritation; that effect, however, is eaſily prevented, whilſt, at the ſame time all the advantages of the remedy are preſerved, by diminiſhing the quantity of mercury: Half an ounce of mercury diſſolved in an equal quantity of

of ſtrong ſpirit of nitre, to a pound either of Axunge or of freſh butter, has, upon trial, been found to be very proper proportions.

THIS makes a very effectual and perfectly ſafe ointment for all ſuch eruptions, as partake either of a venereal taint, or are in the leaſt connected with common itch; to ſuch as, for the latter, do not incline, on account of the ſmell, or for any other reaſon, to make uſe of ſulphur, it ſeems to be by much the beſt method of applying mercury.

BY a proper and continued uſe of the ſeveral remedies recommended, but above all by a due attention to cleanlineſs, almoſt every herpetic complaint may, at laſt, be removed.

AFTER theſe ſeveral obſervations on ſuch diſorders, it is not thought improper to remark, that there are many complaints of the eruptive kind, to which children eſpecially are liable, which may all be reduced to one or other of the ſpecies of herpes enumerated, and which, of courſe, may be all cured by the ſame general method of treatment.

THUS

THUS the *tinea capitis* and *cruſta lactea* are commonly deſcribed as diſtinct and unconnected diſeaſes; but they both, it is preſumed, may, with propriety enough, be reduced to the ſame ſpecies of herpes, and ſeem evidently, indeed, to belong to the ſecond, or what we have termed *Puſtuloſus*, they being naturally exactly the ſame, differing only in ſituation, the *tinea* being on the hairy ſcalp, what *cruſta lactea*, and other ſuch eruptions, are upon the face.

THE ſeveral articles of cure enumerated for herpes in general, apply, as was obſerved, with equal propriety to any of theſe; but in *tinea capitis* a peculiarity occurs from the ſituation of the diſorder, which, in the treatment, it has been frequently found neceſſary to attend to. In this complaint, the hair, by occaſioning a more conſiderable remora of the exuded matter, than what occurs in any other ſpecies of herpes, produces in it a greater degree of acrimony, which ſometimes gives riſe to bulbous ſwellings about the roots of the hair; and hence it has been ſuppoſed, that theſe ſwellings, by being perhaps the firſt parts affected, tend to produce and to keep up all the other ſymptoms of the diſorder: So

that

that it is commonly recommended, as the firſt ſtep in the cure of tinea, to extract entirely all the hairs by the roots, either with pitch plaiſters, or with ſome other adheſive application.

THIS, however, is always attended with a great deal of pain, ſometimes produces very troubleſome inflammations, and beſides, is never in the leaſt neceſſary in the firſt ſtages of the diſorder; for though, in very long continued caſes of tinea, theſe tuberoſities at the roots of the hair do ſometimes become ſo conſiderable as to render the cure of ſuch affections more tedious than they otherwiſe would be; yet, merely by keeping the hair very ſhort, and the parts affected as clean as poſſible, the different remedies already enumerated almoſt always effect a cure, without having recourſe to the extraction of the hair.

THE watery ſolution of *corroſive ſublimate* was already recommended as an external application for different herpetic eruptions; but, in no ſpecies of the diſorder does it produce ſuch remarkable good effects as in *tinea capitis;* inſomuch, that, except in very inveterate caſes, a cure may generally

generally be obtained by the uſe of this remedy alone.

ISSUES have already been mentioned as being very uſeful in all eruptive diſorders of this kind; but, in theſe complaints which, in childhood eſpecially, are ſo common, they ſeem to be ſtill more neceſſary, and more uſeful, than in the advanced periods of life; for, as thoſe children that are particularly liable to ſuch eruptions, are commonly of very groſs full habits, it is ſcarce poſſible often to obtain, at leaſt laſting cures, without, in the firſt place, introducing adequate drains.

INDEED iſſues of themſelves, with a proper attention to cleanlineſs, will very frequently, in the firſt years of childhood, get the better of all ſuch complaints, without the aſſiſtance of any other remedy; and they do not, by any means, prove ſo prejudicial to the conſtitution as the frequent uſe of purgative medicines, which, in ſuch caſes, are ſo commonly had recourſe to: Purgatives do, no doubt, frequently prove ſerviceable, by carrying off ſuch ſuper-abundancies of fluids as the ſyſtem happens to be loaded with, but never

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in ſuch an eaſy gradual manner as is done by iſſues.

THERE has an objection been commonly made to the uſe of iſſues, in general, that they are very apt to become ſo far habitual as to prevent their being afterwards healed up, without conſiderable riſk: This, in children, however, ſhould never be any material obſtacle to them, for, about the fifth or ſixth year of age, when children are able to take more regular and fatiguing exerciſe, when the ſyſtem having acquired a firmer tone, is rendered more capable of preſerving a due balance between the ſolids and different contained fluids; and when, in fact, the latter are never obſerved to be ſo abundant as in the preceding years of childhood, there is not then the ſame neceſſity for ſuch drains, and it might even, in ſome inſtances, be prejudicial to continue them longer. We do accordingly obſerve about that period of life, many of the eruptive diſorders, which before had prevailed, diſappear entirely; nature then requiring a greater ſupply of fluids for all the different ſecretions, throws off, by their means, what ſhe formerly found moſt conveniently

ently got free of, by different eruptions upon the ſurface.

SECTION X.

Obſervations on the venereal Ulcer.

HAVING, in the ſeveral preceding ſections, gone through the conſideration of all ſuch ulcers, as can, with propriety, be looked upon as local affections merely, thoſe of an oppoſite nature come next in courſe to be treated of, and are, as was formerly remarked, to be comprehended in the *ſecond claſs*.

THE general character of this claſs has been already given. It includes, as was formerly remarked, all ſuch ulcers as are connected with or depend upon ſome general diſorder of the ſyſtem; and the ſeveral ſpecies of it, are, *the Venereal, the Scorbutic, and Scrophulous*.

HAVING ſpoke ſo fully upon the different ſpecies of local ulcers, all that is neceſſary to be

ſaid upon thoſe of the ſecond claſs, is to point out as conciſely and diſtinctly as poſſible, the different characteriſtics by which they may be diſtinguiſhed; together with ſuch remedies as may be peculiar to, or proper for each, referring always to what may have been remarked in the preceding ſections, for whatever may, in common occur between any two ſpecies of the different claſſes.

§ 1. *Varieties of the venereal Ulcer.*

By venereal ulcers, in general, are meant, ſuch as are connected with an univerſal ſyphilitic affection of the ſyſtem. But as *chancres*, and ſome other ſpecies of ſores which occur in that diſorder, may, with equal propriety, be termed *venereal ulcers*; and although they are not always connected with a general infection, yet, in order to prevent any ſort of ambiguity, it will be proper here to comprehend the conſideration of theſe alſo.

Venereal ulcers then, may be divided into two varieties, *viz.* Thoſe which appear as primary ſymptoms of the diſeaſe, and ſuch as more properly may be conſidered as ſymptomatic.

Of

OF the former kind are chancres in general, whether upon the parts of generation communicated by venereal intercourſe; upon the nipples and breaſts of women by nurſing infected children; or on the lips and parts adjacent communicated by ſalutation; for all ſuch ſores, though ſeated on different parts, are of one and the ſame nature. Theſe ulcers too, may ſometimes be reckoned primary, which remain after the opening or burſting of ſuch buboes as appear to have ariſen from an infection lately communicated, and before there is any probability of the whole ſyſtem being affected.

SUCH ulcers again are conſidered as ſymptomatic, which ariſe in conſequence of a general taint of the habit; of this kind are all thoſe which ſucceed to old buboes, and ſuch as appear along with other venereal ſymptoms, a conſiderable time after expoſure to infection; the moſt ordinary ſituations for which, are, the throat, palate, noſe, the parts immediately above the bones of the cranium, tibia, humerus, and other hard bones thinly covered with fleſh.

ALTHOUGH

ALTHOUGH, in many caſes, it is not eaſy to diſtinguiſh ſuch differences in venereal ſores, yet it may frequently be done, and ſhould then be always attended to, the treatment of the two different ſpecies being in ſome reſpects exceedingly different, as will be afterwards particularly taken notice of.

IN ſuch caſes, the principal means of diſtinction are obtained either by information from the patient, or from the appearances of the different ſores themſelves.

IF, ſoon after expoſure to infection, an ulceration appears upon the part to which the virus was immediately applied, together with ſwellings of any of the glands in the courſe of the lymphatics, we may be almoſt convinced that theſe are both only local affections, and ought to be conſidered accordingly as primary ſymptoms. It is ſuch ulcerations as thus occur from the immediate application of the venereal virus, which, in general, are termed chancres; they appear, at firſt, as ſmall miliary ſpots, which ſoon riſe and form little veſicles, that upon burſting, diſcharge ſometimes a thin watery fluid, and, on other occaſions,

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a more thick yellow matter: The edges of such sores are generally hard and painful, and are, together with such glandular swellings, as already described, commonly attended with more or less inflammation.

THESE are the common appearances of venereal sores from a recent infection, but it is chiefly those ulcers which appear as symptoms of a long continued affection, that, to surgeons, prove most troublesome. They are distinguished from those already described, as likewise from every other species of ulcer. 1. By information from the patient. 2. By their situation. And 3. By their appearances.

WHENEVER an ulcer is suspected to be of this nature, certainty, with respect to it, may frequently be obtained from the patient. Thus, if a person who has long had other symptoms of a venereal infection in his constitution, is attacked with one or more ulcers, and that whether from external injuries or not, if they resist the common methods of cure, there can be very little doubt of their being infected with the general taint of the habit.

IT ſometimes happens, however, that ſuch information is not to be obtained, there being nothing more common than patients concealing and even denying, when enquired at, every thing of that nature; and on other occaſions, patients cannot even themſelves be certain whether they are infected or not, having perhaps no other ſymptoms at the time, than theſe ulcers, and which they may not probably have conſidered as of the venereal kind. When this happens to be the caſe, recourſe muſt be had to the ſituation and appearances of the ulcer itſelf.

BY far the greateſt part of venereal ulcers from an old infection, appear, as was already remarked, immediately above the bones, and ſuch of theſe eſpecially as are moſt thinly covered with muſcles. They firſt appear in the form of a red ſomewhat purpliſh efflorescence, not circumſcribed, but, in general, rather conſiderably diffuſed: This ſoon comes to riſe into a number of very ſmall puſtules, which ooze out a thin fretting ſerum; at firſt theſe puſtules, when obſerved through a glaſs, appear perfectly diſtinct, but they at laſt run together, and form one large ulcer, whoſe edges are commonly ragged and

and ſomewhat callous, and there is generally a light red appearance, which extends a conſiderable ſpace beyond the ſore, over the ſkin that does not ſeem to be otherwiſe diſeaſed.

SORES of this kind, have frequently a very remarkable appearance, being hollowed out as it were into the form of a cup, generally narrow and contracted at the bottom, with the edges extending gradually till they reach the outward circumference. This at leaſt, is commonly the caſe, except when carious bones happen to lie at the bottom of the ſores, and then they are generally filled up with troubleſome fungous excreſcencies.

VENEREAL ulcers are not commonly attended with much pain, at leaſt, ſeldom ſo much as from their appearances might be expected; in ſome inſtances, however, it is otherwiſe. And, the diſcharge of all ſuch ſores, though at firſt thin, comes, at laſt, to put on a very particular and characteriſtic appearance, being of a conſiſtence rather more tough and viſcid than good pus, with a very lothſome, though not the ordinary fœtid, putrid ſmell; and a very ſingular *greeniſh yellow colour.*

THESE

THESE are the moſt common appearances of old venereal ulcers, and when all or any of them occur upon any of the ſituations enumerated, we may almoſt always determine with certainty, the complaint to be of the ſyphilitic kind.

THE diſtinction propoſed of venereal ulcers into primary and ſymptomatic, is in the treatment found to be a matter of conſiderable importance; for thoſe of the former kind, if attended to immediately on their firſt appearance, and before any abſorption of matter has taken place, might, undoubtedly, be frequently removed without the aſſiſtance of any internal medicine whatever, and that merely, by converting an incipient chancre, into the ſtate of a ſimple ulcer, by burning or deſtroying the venereal matter contained in it with cauſtic *.

BUT, although a cure might in this manner be ſometimes effected with ſufficient ſafety, yet as we have no means of becoming abſolutely certain whether ſome of the virus may not have entered the ſyſtem, the cure of even the ſlighteſt chancre ſhould never be truſted to any other remedy

* Dr MONRO's Prelections.

medy than the internal uſe of mercury; with this material difference, however, that in incipient ulcers of this kind, a fourth part of the medicine commonly anſwers, than what becomes requiſite in ſuch as appear, in conſequence of an old general infection.

THE diſtinction propoſed, points out likewiſe another circumſtance of conſequence in the cure. In ulcers from an old pox, we ought never to make uſe of mercurial and other dreſſings with a view to heal and dry them up ſoon, but ſhould rather truſt entirely to mercury given internally, and, in the mean time, continue to apply ſuch remedies only, as are neceſſary for keeping the ſores clean and eaſy.

IN this manner, the different ulcers healing up merely by the uſe of internal remedies, proves almoſt a certainty of the diſeaſe being eradicated from the habit; and is, indeed, in ſuch an event, the beſt index for a Surgeon to be directed by, as it ſhews plainly, that very little more mercury can be neceſſary, a circumſtance which in no other way a practitioner can ever be ſo certainly convinced of.

WITH many practitioners, it has been the common method, to treat in the manner directed, chancres and all thoſe venereal ulcers we have termed primary; whilſt, at the ſame time, they have not thought proper to apply the practice to thoſe of long ſtanding, or that proceed from a general infection of the ſyſtem. But with very little attention, it muſt appear, that the direct reverſe ſhould be followed, and the advantages attending it would commonly be found conſiderable.

THE reaſons for keeping old venereal ulcers open, during the internal exhibition of medicines, have been already explained. But in recent chancres, produced by a mere local application of a corroding matter, as they are entirely topical, and not connected with any diſorder of the ſyſtem, mercury given inwardly, has not in them near ſuch a chance of effecting a cure; and, accordingly, we often find, that after very conſiderable quantities of the medicine have been uſed, we are at laſt, after all, obliged to have recourſe to ſome external application.

THIS, however, is far from being the greateſt inconvenience attending the practice, for ſo long

as

as a chancre or ulceration continues open, the ſyſtem is ſo long expoſed to a plentiful ſupply of venereal matter, and has thereby a much greater chance of being thoroughly infected than if the chancre or ſource of that matter had been healed ſoon after its appearance.

BY ſome it may be alledged that it is not of much conſequence, whether a ſmall or a larger portion of the venereal matter be taken into the ſyſtem, as the leaſt particle may juſt as certainly produce all the ſymptoms of the diſeaſe, as if a much larger quantity had been admitted.

THIS, in ſome reſpects, may probably enough be the caſe, as the ſyphilitic matter is known to be of a very penetrating aſſimilating nature; but there is ſurely a much greater chance of *a very ſmall portion* of ſuch matter being prevented from infecting the ſyſtem, either by being ſtopped in its courſe, by occaſioning, as it frequently does, obſtructions of one or more glands, or even by being afterwards thrown out at ſome of the emunctories, than there is of a *conſtant ſupply* of the ſame ſort of matter being in any way removed.

THAT

THAT the opinion on this point is at leaſt very probable, will not readily be controverted; but it is likewiſe ſaid, that the practice of treating chancres, by the uſe of internal remedies only, can never occaſion any kind of riſk, as the mercury, which is, or ought always, in ſuch caſes, to be exhibited, acting as a certain antidote to the venereal virus, muſt ſoon have got ſuch a footing in the ſyſtem as to prevent the latter from having any farther influence.

SUCH reaſoning, however, is, in practice, by no means to be depended on: For, in the *firſt* place, though mercury in general proves a very certain cure for venereal complaints already ſubſiſting in the conſtitution, yet mercury being preſent in the ſyſtem, and that too in conſiderable quantities, does not prevent a new infection from taking place; of this I have known many inſtances, and it would probably, if attended to, be found to occur very frequently.

BUT again, although we were even certain, if a proper quantity of mercury was preſent in the fluids, that no farther infection could take place from the introduction of a larger portion of venerea

nereal matter; yet, in cases of chancre, we can never be sure that the medicine will so soon enter the circulation as to produce this prophylactic effect. For the disappointments that practitioners daily meet with in saturating the fluids properly with mercury, either from the fault of the preparation, from its going off by stool, or some other cause, should make us upon this point, at least very doubtful.

UPON the whole, therefore, the cure of chancres, and of all venereal ulcers of the same kind, should be hastened as much as possible, not only by internal medicines, but by external applications likewise.

§ 2. *Of the Cure of the venereal Ulcer.*

THE most effectual method in every case of chancre, as already hinted, would probably be, to touch the part with some strong caustic as soon as the disease is observed, and, by thus destroying at once all the venereal matter, the sore being then exactly in the state of a simple ulcer from any other cause, would, with ordinary dressings, be very easily cured: Practitioners, however,

ever, are ſeldom called in ſo early, and frequently not till the different ulcerations are conſiderably enlarged, when the practice could not readily prove effectual, and when it might ſometimes even be dangerous to apply, ſo extenſively, to ſuch tender parts as chancres are commonly ſeated on, ſuch irritating remedies as any of the more active cauſtics.

WHAT I have generally found to anſwer, in every caſe of ulcerated chancre not attended with much inflammation, is, after wiping the ſores as free from matter as poſſible, to duſt them well with *Mercurius precipitatus ruber* finely prepared, and to apply a pledgit of any common ointment over all. This does not *commonly* occaſion much pain or irritation, and has the effect of producing a kind of ſlough over the ſore, which, in the courſe of a dreſſing or two, generally comes away, and leaves the ulcer perfectly clean.

CHANCRES being reduced to this ſtate, would probably ſoon heal, although no other dreſſing was applied than common cerate; but, leaſt any venereal matter ſhould remain, I have always, after

after removing the dreſſings with the precipitate, been in the way of uſing the ſtrong mercurial ointment of the Edinburgh Diſpenſatory, and to dreſs with it till the ſores heal up.

IN this manner, in general, all ſuch ulcerations are ſoon got the better of, and with much leſs mercury inwardly, than if allowed for any conſiderable time to remain open.

BY long continuance, however, and neglect of proper remedies, even theſe, at firſt, ſeemingly ſimple ſores, come to put on all the appearances of ſuch ulcers as depend upon a general infection; and as in reality they then are ſuch, in every reſpect, their treatment muſt vary accordingly.

ULCERS of this kind, upon the penis eſpecially, when of long ſtanding, are very apt to become inflamed, and then, by the pain they occaſion, prove frequently exceedingly troubleſome. When the inflammation comes any conſiderable length, blood-letting is ſometimes requiſite, but, in general, that ſymptom is eaſily enough kept under, merely

merely by a continued and proper use of the Saturnine poultice.

THE inflammation being once thoroughly removed, the best application, in all such cases, is the wax ointment, as formerly recommended, till a proper quantity of mercury has been exhibited, and then the sores commonly heal, without any farther application.

THERE are two different modes in use for throwing mercury into the system; either by the mouth, or by the absorbents on the surface of the body, by means of friction: But, as the last of these methods is by much the most troublesome and inconvenient, and does not, upon trial, appear to be attended with any superior advantages, the former is now, I believe, very commonly preferred.

VARIOUS forms of mercury have been contrived for internal exhibition, but the simple triturated quick-silver pill, of the Edinburgh *Pharmacopoia*, is, in general, by much the best: It proves commonly more effectual, and is seldom attended with any of the inconveniencies which often

often occur from the uſe of the different mercurial calces.

BUT whatever preparation of mercury be employed, it ſhould always be continued till a ſoreneſs of the mouth be induced, that being the only certain indication of the medicine having entered the ſyſtem; and as ſuch a degree of it is not attended with any of the inconveniencies which often enſue from a violent ſalivation, and, as from experience, it is now found to have all its advantages, it ſhould never in any caſe be carried farther; it not being the quantity of ſalivary matter diſcharged, that has any influence in the cure of venereal complaints, but the real quantity of active mercury introduced to the circulation.

IT is not always eaſy, however, to prevent mercury from running off too quickly by the mouth, ſo as ſometimes to occaſion very troubleſome ſalivations. To guard againſt this circumſtance by determining the medicine more particularly to the ſkin, the warm bath has been frequently recommended, both as a preliminary preparation, and to be uſed along with the mercury; but the ſame effect, is, in general, more eaſily

obtained, and with leſs riſk to the patient from cold, by the uſe of a flannel ſhirt next the ſkin, and by drinking plentifully of *decoction of ſarſaparilla or of the woods;* care, at the ſame time, being taken to keep the body in a proper temperature, and that it be never expoſed to any conſiderable degree of cold.

A courſe of this kind being continued for a longer or ſhorter period, according to the degree of infection, and violence of the ſymptoms, in general, at laſt, obtains a cure of all ſuch complaints.

IN ſome inſtances, however, the quick-ſilver pill above recommended, either does not produce all the deſired effects, or even fails altogether. On ſuch occaſions, the corroſive ſublimate is frequently found to anſwer, and may be given either in the form of pills, or in the ſpiritous ſolution; the former, however, never proves ſo naufeous as the latter, ſo that a larger quantity of the medicine can in that way be commonly exhibited.

IN very obſtinate venereal ulcers, it becomes ſometimes neceſſary to make trial of ſeveral different

ferent preparations of mercury, and one will, on particular occaſions, be found very ſerviceable, though none of the reſt may appear to have had any kind of influence.

THE moſt certain rule for the quantity of the medicine to be exhibited, is, that it ſhould be always continued for ſometime after every ſymptom of the diſeaſe has diſappeared, and that for a longer or ſhorter period, as the diſorder may have been of long or ſhort ſtanding, and as the ſymptoms may have been inveterate or otherwiſe; but this very material circumſtance in the cure of every venereal complaint, muſt be ultimately determined by the judgment of the practitioner in attendance.

THOUGH by ſuch a courſe of mercury inwardly, with the neceſſary external treatment formerly pointed out, almoſt every ulcer of this nature, may, as was obſerved, be in general removed; yet in ſome few inſtances it is otherwiſe, and the ſores cannot be brought to cure, even though the mercury be continued very long after every other ſymptom has diſappeared, and when, from that circumſtance, and from the quantity of the medicine

medicine exhibited, there is every reaſon to think that the venereal taint in the ſyſtem is altogether eradicated.

As an ulcer in that ſituation, cannot with propriety be conſidered as a venereal affection, it would be in vain to expect a cure from the uſe of any preparation of mercury whatever; whenever ſuch ſores therefore, ſhew a greater obſtinacy than what from their appearances might be expected, and, eſpecially, when they do not yield in any degree to mercury, it gives great reaſon to ſuſpect, that ſome other diſeaſe may probably have ſubſiſted in the conſtitution, together with Lues Venerea, and that both may have had ſome ſhare in the production of the ulcers.

So ſoon as the nature of this conjoined diſorder is diſcovered, proper remedies muſt be had recourſe to with a view to its correction, which being accompliſhed, the cure of the ſores will in general go eaſily on.

ON ſome occaſions, however, venereal ulcers prove obſtinate, when the ſyſtem appears perfectly free from every other diſorder. In ſuch caſes, when

when the fores are ſeated upon, or near to any of the bones, eſpecially if fungous excreſcencies appear, there is commonly reaſon to ſuſpect a caries as the cauſe, which, if on examination is found to be the caſe, the directions formerly laid down for the treatment of carious bones being attended to, whilſt, at the ſame time the mercury is continued, if the patient is otherwiſe healthy, there will be little doubt of a cure being at laſt obtained.

In ſome inſtances again, when there is no reaſon from the ſituation of the fores, to imagine that a caries can be the cauſe of their inveteracy, and although there is no appearance either of ſcrophula, ſcurvy, or of any other diſeaſe of the conſtitution, yet ſtill they go on without ſhewing any diſpoſition to heal, and perhaps, even ſeem to gain ground.

In ſuch caſes, when the ſyſtem is much reduced by long confinement and a tedious courſe of mercury, as it frequently indeed is when a violent ſalivation has been long kept up, the beſt and moſt effectual remedy, in general, is a good light nouriſhing diet, with the aſſiſtance of freſh air

air and moderate exerciſe, which, by invigorating the conſtitution, more certainly promotes a cure than all the medicines and applications commonly had recourſe to.

IN all ſuch circumſtances indeed, the effects of a change of this nature is often ſurpriſing, for the moſt obſtinate ulcers that have reſiſted every uſual remedy, I have, in ſeveral inſtances, ſeen in this way only ſoon entirely cured: In this ſituation of theſe ſores too, the Peruvian bark taken in proper quantities, frequently proves very ſerviceable.

WITH reſpect to the external treatment of old ſores of this kind, as the ſloughs they are commonly covered with, render ſome degree of ſtimulus always neceſſary, *common baſilicon*, with a large proportion of *red precipitate*, anſwers for that purpoſe exceedingly well. Two drachms of the mercury to an ounce of ointment, make very good proportions, and afford one of the beſt dreſſings for every ulcer of this nature: And when, by the uſe of ſuch an ointment, the ſloughs have all caſt off, and a diſcharge of proper matter has been induced, the treatment

muſt

muſt afterwards be regulated, according to the ſeveral circumſtances already pointed out in the different preceding ſections on local ulcers.

WHEN any of the glands happen to be the ſeats of venereal ulcers, as a kindly ſuppuration is in them always difficult to induce, it is ſometimes neceſſary before a cure can be obtained to deſtroy, the whole, or a conſiderable portion of ſuch as are very much hardened. This is moſt conveniently and eaſily done by reiterated applications of cauſtic, the ſurface of the affected glands being rubbed over every third or fourth day with *cauſticum lunare*, in the courſe of a ſhort time ſo much of them as have been greatly diſeaſed, may, in that manner, be deſtroyed; and the remainder, by proper attention to every other circumſtance of the cure, being brought to furniſh healthy granulations, the ſores, without any farther difficulty, are thereby ſoon induced to heal.

ALTHOUGH, in general, by attending to all theſe different circumſtances as appearances may indicate, almoſt every ulcer of the venereal kind may at laſt be removed, yet, in long habitual and

and reiterated poxes, that have never been properly cured, the very *ſtamina vitæ* come to be ſo corrupted through their whole organiſation with the infection, as, in ſome inſtances, to produce ſuch an inveteracy in ulcers, as does, indeed, baffle all the efforts both of nature and art, and at laſt carries off the patients in very great miſery. Some ſuch inſtances I have ſeen in different hoſpitals, where probably ſuch very obſtinate caſes are only to be met with.

SECTION XI.

Obſervations on the ſcorbutic Ulcer.

§ 1. *General Remarks on Scurvy.*

IT was remarked in a former ſection, that, under the appellation of ſcorbutic ulcer, there have, in general, been ranked a great many of theſe eruptive diſeaſes to which the ſkin is liable, as the itch, ſeveral ſpecies of lepra, *&c.* But

But the real nature of true ſcurvy being now much better underſtood, and it being known that no ſuch ſymptoms as eruptions of that kind ever occur in it, the impropriety either of applying the term ſcorbutic to ſuch, or of treating them as ſymptoms of that diſeaſe, muſt appear exceedingly evident.

ULCERS which proceed from any of the forementioned eruptive diſorders, it was already remarked, are probably connected with a very oppoſite ſtate of the ſyſtem from thoſe really ſcorbutic: The former generally, if not always, depending upon an inflammatory diatheſis, whereas, in true ſcurvy, the fluids arrive at probably the higheſt degree of diſſolution and putrefaction, which, in a living perſon, it is poſſible for them to attain to.

FROM the writings of ſeveral old authors, it appears, that ſcurvy was a well known diſorder ſome ages ago; but the true cauſes, ſymptoms and method of treatment of the diſeaſe were never very accurately underſtood, till Dr LIND's publication on the ſubject appeared.

THE ſeveral ſpecies of ſcurvy enumerated by authors, viz. *the Muriatic*, *the Alkaline*, &c. ſo named from the nature of the cauſes ſuppoſed to produce them, are now known to be very falſe and improper diſtinctions, the true ſcurvy being always of the ſame nature, and always produced by the ſame ſet of cauſes, wherever theſe occur, in whatever climate, and whether at ſea or land.

§ 2. *Symptoms and Cauſes of the ſcorbutic Ulcer.*

AMONG other ſymptoms of ſcurvy enumerated by Dr LIND, in his ingenious Treatiſe on Scurvy, the ulcers which are ſo common in that diſeaſe, are particularly deſcribed, and as he gives a very clear and diſtinct idea of them, we ſhall here tranſcribe *verbatim* the Doctor's deſcription of them.

"THE diſtinguiſhing characteriſtics of ſcorbutic ulcers, are as follow: They afford no good digeſtion, but a thin fœtid ſanious ſtuff, mixed with blood; which at length has the true appearance of coagulated gore lying caked on the ſurface of the ulcer, and is, with great difficulty, wiped off or ſeparated from the parts below.

THE

THE fleſh underneath theſe ſloughs feels, to the probe, ſoft or ſpongy, and is very putrid: No detergents or eſcharotics are here of any ſervice, for, though ſuch ſloughs be with great pains taken away, they are found again at next dreſſing, where the ſame ſanguineous putrid appearance always preſents itſelf: Their edges are generally of a livid colour, and puffed up with excreſcencies of proud fleſh, ariſing from below under the ſkin.

WHEN too tight a compreſſion is made, in order to keep the fungus from riſing, they are apt to leave a gangrenous diſpoſition, and the member never fails to become œdematous, painful, and for moſt part ſpotted.

As the diſeaſe increaſes they at length come to ſhoot out a ſoft bloody fungus, which the ſailors expreſs by the name of *bullocks liver*, and indeed it has a near reſemblance to that ſubſtance when boiled, both in colour and conſiſtence. It often riſes, in a night's time, to a monſtrous ſize; and, although deſtroyed by cauteries, actual or potential, or cut ſmooth with a biſtoury, in which caſe a plentiful hæmorrhage generally enſues, it is found,

found, at next dreſſing, as large as ever. They continue, however, in this condition a conſiderable time, without affecting the bones.

THE ſlighteſt bruiſes and wounds of ſcorbutic perſons degenerate into ſuch ulcers, their appearance, on whatever part of the body, is ſo ſingular and uniform, and they are ſo eaſily diſtinguiſhed from all others, by being ſo remarkably putrid, bloody, and fungous, that we cannot here but take notice of the impropriety of referring moſt of the inveterate and obſtinate ulcers in the legs, with very different appearances, to the ſcurvy.*"

THIS accurate deſcription of the ſcorbutic ulcer, comprehends almoſt the whole appearances ever obſerved in ſuch affections, only it may be remarked, that at land, unleſs in very particular ſituations, and from a conſtant expoſure to all the more active cauſes of ſcurvy, ſuch inveteracy as deſcribed by Dr LIND, is not often met with: But in every country, and in none, perhaps, more frequently than in ſome parts of this kingdom, ſlighter degrees of the ſame kinds of ſores very

* See Lind's Treatiſe on the Scurvy.

very often occur, forming what, by practitioners in general, are termed *Foul* or *Malignant Ulcers.*

IN the Royal Infirmary of this place, ſores of this kind are frequently met with, accompanied ſometimes with even the moſt characteriſtic ſymptom of ſcurvy, ſoft ſpongy gums. In the worſt caſes, however, that I ever met with here, there never was the appearance of ſuch a high degree of putreſcency in the ſyſtem, as we are told happens frequently in long voyages at ſea.

THIS may perhaps be owing to ſuch complaints of the ſcorbutic kind, as occur in this country, being generally among the loweſt ſet of people, and proceeding rather from a real want of a *ſufficient ſupply* of food, than from confinement to any one kind that can be at all conſidered as particularly *ſeptic*, or as prediſpoſing to ſcurvy.

IN ſuch patients the putrid diatheſis ſeldom even prevails to ſuch a degree as to induce the formation of ulcers in parts previouſly ſound, but never fails to ſhew itſelf in ulcers either already formed, or in ſuch wounds as happen to be inflicted while ſuch a ſtate of the fluids ſubſiſts.

fiſts. Indeed very many of the ulcers upon the legs, and other parts of the generality of our poor people, frequently partake, more or leſs, of the real ſcorbutic taint; as is evident, both from their appearances, cauſes, and particularly from the method of cure that is found to ſucceed beſt; a good nouriſhing diet commonly doing more towards the effecting a cure than all the applications uſually had recourſe to.

THE immediate or proximate cauſe of ſuch ulcers, as of every other ſcorbutic ſymptom, may be referred to a certain degree of putreſcency in the fluids; which again may be induced by a variety of cauſes, but of which the moſt material are, living conſtantly upon ſalt proviſions, a total want of vegetables, with expoſure to a cold moiſt atmoſphere: Many other exciting cauſes of the diſorder might be mentioned, but as that would lead to a more extenſive diſcuſſion of the ſubject than is here intended, for farther information, Dr Lind, Sir John Pringle, Huxham, with other publications more directly on the ſubject, may be conſulted.

§ 3.

§ 3. *Of the Cure of the ſcorbutic Ulcer.*

THE cure of ſcorbutic ulcers, it is evident, muſt depend much upon the correction of the putrid diatheſis in the ſyſtem: For which purpoſe vegetables of all kinds, but eſpecially thoſe of an aſceſſant nature, with milk and whey, are found to be almoſt certain remedies. The different ſecretions, eſpecially thoſe by the ſkin and bladder, ſhould be gently promoted, for the former particularly, in every caſe of ſcurvy, being put almoſt an entire ſtop to, the diſcharge being again reſtored, probably by carrying off many of the putrid particles with which the fluids, in ſuch caſes, abound; is found to have a conſiderable influence in the cure. Gentle laxatives too, for the ſame reaſons, are of uſe, and as ſuch, *Tamarinds and Crem of Tartar with Manna* anſwer well.

THESE, together with a total abſtinence from ſalted food, and from all the other exciting cauſes of the diſeaſe, in a ſhort time generally get the better of every ſcorbutic ſymptom, and among others of ſuch ulcers; the beſt external applications for which are antiſeptics of the moſt powerful

powerful kinds. Lind recommends *Unguentum Ægyptiacum*, and *Mel Roſarum acidulated with Spiritus Vitrioli.*

THESE, in general, are the remedies found moſt effectual, and which are commonly had recourſe to in very bad caſes of ſcurvy; but in ſuch putrid ulcers as in this country moſt frequently occur, the ſeptic ſtate of the fluids, as was obſerved, being ſeldom in ſuch a high degree, it is very rarely neceſſary to be particularly attentive in putting the patients on what may properly be called an *anti-ſcorbutic* courſe.

THE common malignant or ſcorbutic ulcer of this climate ſeeming, as was already remarked, to proceed more frequently from a real deficiency of food than from any other circumſtance, putting the patients, by degrees, upon a full allowance, with a daily though moderate proportion of ſome generous wine, has always a wonderful effect on their recovery.

THE Jeſuit's bark too, is here a moſt powerful remedy, and is, indeed, in ſuch ulcers, of more real and evident ſervice, than in any other kind of

of ſore I ever ſaw it uſed in: When given in proper quantities, which is always to be determined by the patient's ſtomach, it ſeldom fails of producing in the courſe of a few days, a conſiderable change for the better. For ſuch ſcorbutic ulcers as occur in this country, the bark indeed, is almoſt the only internal medicine that is ever neceſſary.

WITH reſpect to the uſe of mercury in theſe kinds of ulcers, it ought always to be had in view, that in ſuch as are really ſcorbutic, inſtead of acting as a remedy, if given in any conſiderable quantities, it proves almoſt a certain poiſon. Lind from a great deal of experience, ſays, with reſpect to this point: "Mercury in a truly ſcorbutic ulcer, is the moſt pernicious medicine "that can be uſed*." So that a proper diſtinction between ſores of this nature, and the ſeveral eruptive diſorders commonly termed ſcorbutic, appears in the treatment a matter of conſiderable importance; in the latter, mercury being not only generally given with impunity, but in ſome inſtances with advantage; whereas in the former,

* Vide, Treatiſe on the Scurvy, part II. chap. II.

it can never be adminiſtred but with very great hazard.

PERUVIAN bark, as an external application too, anſwers exceedingly well in all ſuch ulcers; pledgits dipped in the ſtrong decoction of bark, and applied to the ſores, have generally a great effect in correcting the fœtor and putreſcency of the diſcharge: But the beſt application for that purpoſe in theſe ulcers, is the *carrot poultice*, which, when conjoined with the internal uſe of bark, and a proper regimen, in the courſe of a ſhort time generally corrects the putreſcency ſo effectually, that the ſores being dreſſed for a few days longer, with pledgits of baſilicon and red precipitate, with a view to procure the removal of any ſloughs that remain, a cure is afterwards commonly eaſily obtained, by attending to the directions formerly laid down for the management of ulcers in general, and, particularly, to the introduction of an iſſue, along with moderate compreſſion by means of a roller.

WHAT has hitherto been ſaid, with regard to the treatment of ſcorbutic ulcers, applies in a great meaſure with equal propriety to all ſuch ſores

ſores as are in the leaſt connected with a putreſcency of the fluids, from whatever cauſes that may have been induced. Thus, ſuch ſores as remain after critical abſceſſes that ſucceed to putrid fevers, require the ſame general method of treatment; and the ſame may very probably be found the moſt effectual, in thoſe produced by peſtilential diſorders, though, never having had an opportunity of ſeeing the real plague, I cannot from experience venture to aſſert it.

SECTION XII.

Obſervations on the ſcrophulous Ulcer.

§ 1. *Of the ſymptoms and cauſes of the ſcrophulous ulcer.*

BY ſcrophulous ulcers, are meant thoſe ſores, which remain after the opening or burſting of ſuch ſwellings, as appear in different parts of the body, as ſymptoms of ſcrophula or evil.

FROM

FROM the frequent occurrence of ſcrophula, it is ſuch a well known diſeaſe, that it is almoſt unneceſſary here to give any deſcription of it. It begins with indolent, ſomewhat hard colourleſs tumors, which at firſt chiefly affect the conglobate glands of the neck, but in proceſs of time, the cellular ſubſtance, ligaments of the joints, and even the bones themſelves come to ſuffer.

IN ſcrophula, the ſwellings are much more moveable than thoſe of the ſchirrous kind, they are generally ſofter, and ſeldom attended with much pain: They are tedious in coming to ſuppuration, are very apt to diſappear ſuddenly, and again to riſe in ſome other part of the body. We may likewiſe mention, as characteriſtic circumſtances of this diſeaſe, a remarkable ſoftneſs of the ſkin, a kind of fullneſs of the face, with generally large eyes, and a very delicate complexion.

ULCERS which appear in ſcrophula, never yield a good diſcharge, affording, upon their firſt appearance, a viſcid, glairy, and ſometimes a whitiſh curdled matter, that afterwards changes into a more thin watery ſanies. The edges of the

the ſores are frequently, though not always, painful, and are conſtantly very much raiſed or tumified. So long as the ſcrophulous diatheſis ſubſiſts in the conſtitution, ſuch ulcers very often remain for a great length of time, without ſhewing any diſpoſition either to heal or to turn worſe; at other times they heal very quickly, and again break out in ſome other part of the body.

A variety of cauſes have been mentioned, as tending to produce ſcrophula, *viz.* a crude undigeſtable food; bad water; living in damp low ſituations; its being an hereditary diſeaſe; and in ſome countries endemic.

MANY other cauſes too have been enumerated by authors, but a full conſideration of them we cannot here propoſe to enter into. This, however, may be obſerved, that whatever may, in different circumſtances, be the exciting or predisposing cauſes of ſcrophula, the diſeaſe itſelf either depends upon, or is at leaſt much connected with, a debility of the conſtitution in general, and probably of the lymphatic ſyſtem in particular; the complaint always firſt ſhewing itſelf

itſelf by ſome affections of the latter: And that debility has at leaſt a conſiderable influence in its production, is probable, not only from the evident nature of many of the cauſes ſaid to be productive of ſcrophula, but likewiſe from ſuch remedies as are found moſt ſerviceable in the cure, which are all of a tonic invigorating nature.

§ 2. *Of the Cure of the ſcruphulous Ulcer.*

IT was long ſuppoſed that ſcrophula depended upon an acid acrimony of the fluids, and this, it is probable, gave riſe to the uſe of burnt ſponge, different kinds of ſoap, and other alkaline ſubſtances, as being the beſt correctors of acidity. But although a ſourneſs of the ſtomach, and *primæ viæ* does no doubt frequently occur in theſe complaints, yet it ſeems to be entirely the conſequence of that general relaxation which in ſcrophula ſo univerſally prevails; and which does not render it in the leaſt neceſſary to ſuppoſe a general aſceſſancy of the fluids to take place, as the one very frequently, it is well known, even in other complaints, occurs, without ſuch an acrimony as has here been ſuppoſed to exiſt being at all ſuſpected.

THERE

THERE is another circumſtance too, which renders it ſtill more probable, that no kind of acrimony whatever exiſts in ſcrophula, *viz.* the very long continuance of matter collected in the different ſwellings which occur in this diſeaſe, without occaſioning either much pain, or ſhewing any tendency to corrode the ſurrounding parts, there being many inſtances of ſuch collections ſubſiſting even for years, without exciting any kind of uneaſineſs: And, in fact, the ſeveral remedies recommended for the correction of ſuch an acrimony as has been ſuppoſed to exiſt in ſcrophulous complaints, never have, at leaſt ſo far as I have ſeen, any influence in the cure.

GENTLE mercurials are ſometimes of uſe, as reſolvents in ſcrophulous ſwellings, but nothing has ever ſuch a conſiderable influence as a frequent and copious uſe of Peruvian bark: Cold bathing too, eſpecially in the ſea, together with frequent moderate exerciſe, is often of ſingular ſervice here; as is likewiſe change of air, eſpecially to a dry climate.

WITH reſpect to the treatment of ſcrophulous ulcers, ſo long as the general morbid diatheſis continues

continues in the system, it is commonly in vain to attempt their cure; nor would it, indeed, often be safe, as by drying up the sores in one part, they very commonly break out somewhere else, and just as readily fall upon the lungs, or some other organ of consequence to life, as on any other.

SUCH instances, indeed, are very frequently met with, whether from the sores healing up naturally of themselves, or by the assistance of art; we should therefore be very cautious in the application either of repellent or of drying remedies, and should rather endeavour to correct the general disease of the habit, by the different strengthening remedies commonly found most useful in the cure.

TILL the disease is eradicated from the habit, all that should, in general, be done to the sores, is to give as free and open vents to the matter as possible, so as to prevent effectually the formation of sinuses.

THE best applications for scrophulous ulcers, are the different saturnine preparations; both the

the watery ſolution of *ſacharum Saturni*, *Goulard*'s *cerate* and *unguentum Saturninum*, anſwer exceedingly well, and tend greatly to prevent the ſpreading of ſcrophulous ſores, which is otherwiſe very apt to occur, as likewiſe that inflammatory complexion which they ſo frequently put on, when relaxing applications are much made uſe of.

A continuation of ſuch ſimple dreſſings, as theſe recommended, is all that, in general, ſhould be attempted, ſo long as any diſorder of the conſtitution may remain; but in ſome caſes, the ulcers are ſo inveterate as to render other reſources alſo neceſſary, they become ſwelled, painful, and diſcharge a corroding acrid matter.

WHEN ſuch appearances occur, a carious bone may frequently be ſuſpected to be at the bottom of the ſores; and then nature muſt be aſſiſted as much as poſſible, in freeing her from ſuch parts of it as are moſt diſeaſed, and that are become looſe. This, in many ſituations, may be eaſily done, but when the complaint fixes on any of the large joints, art can ſeldom afford much aſſiſtance; and as amputation of the member is not, in theſe circumſtances, often adviſe-

able, from the great riſk of the diſeaſe returning in ſome other part, nature alone muſt generally be truſted to for a cure.

IN ſuch a ſituation, therefore, as little can be expected from any operation for the removal of the diſorder, the moſt effectual means ſhould be adopted for aſſiſting nature in getting the better of it. With this view, a continued uſe of ſea-bathing often proves very ſerviceable; but this remedy, in order to have any conſiderable effect, ſhould be continued, with proper intervals, for a number of years, inſtead of a few weeks annually, which is all of it that is commonly thought neceſſary.

THE bark, as formerly directed, ſhould ſtill be continued, and I have ſometimes obſerved very good effects from a conjunction of it with *cicuta;* particularly in procuring a proper diſcharge from ſcrophulous ſores.

WHEN, in courſe of time, and by proper attention to the different circumſtances taken notice of, there is reaſon, from the ſores ſhewing a tendency to heal, to ſuſpect that the general morbid

bid diſpoſition of the ſyſtem is pretty much eradicated, nature is always greatly aſſiſted in the cure, and that too is rendered much more ſafe, by the introduction of an iſſue ſomewhat proportioned to the diſcharge yielded by the different ſores, and which, in all ſuch caſes, ſhould certainly be continued for life.

GENTLE compreſſion has, in the ſeveral preceding ſections, been recommended for different kinds of ulcers; but in no ſpecies of ſore is it either ſo evidently indicated, or of ſo much utility, as in ſcrophulous ulcers: In which, that ſwelling and tumefaction, which frequently raiſe their edges to very conſiderable heights, often prove a greater hinderance to the cure than any other circumſtance; and which, when no conſiderable inflammation occurs, may always, by gentle compreſſion, be eaſily and ſafely removed.

SUCH, in general, is the treatment which anſwers beſt in ſcrophulous ulcers; but ſcrophula being one of thoſe many diſeaſes that ſo frequently put practitioners to the bluſh, from their never yet having diſcovered a proper remedy for it, nothing poſitive or certain can be ſaid with reſpect

reſpect to it. All that was here intended being to point out, as conciſely as poſſible, ſuch a courſe *as moſt effectually aſſiſts nature in her efforts* towards a cure.

SECTION XIII.

General Corollaries in the Management of Ulcers.

HAVING now gone through the conſideration of all the different ſpecies of ulcers, it will not here, probably, be thought improper to exhibit, by way of concluſion, ſuch general corollaries as naturally occur from the ſeveral obſervations thrown out in the preceding ſections.

1. IT appears that, except in a few inſtances, *viz.* in Lues Venerea, Scrophula, and Scurvy, that ulcers are always to be conſidered merely as *local affections*.

2. THAT

2. THAT the varieties in the matters diſcharged by ulcers, excepting in one or other of the above mentioned diſorders, depend always on ſome particular affection of the ſolids in the part diſeaſed, and not on any morbid ſtate of the blood, or other fluids.

3. THAT ulcers appear to be uſeful or otherwiſe to the conſtitution, not by the *quality of matter* afforded, but by the *quantity:* And accordingly, that the cure of even the oldeſt ſore is rendered perfectly ſafe by the introduction and preſervation of ſuch an iſſue as will yield the ſame quantity of fluids the ſyſtem has, by means of the ulcer, been accuſtomed to throw off.

4. THAT, in the cure of ulcers, the firſt circumſtance to be determined, is, whether they are to be conſidered as general or topical complaints. If they appear to be of the former kind, ſuch remedies muſt be adminiſtred, as are known to be moſt effectual for the correction of the diſeaſe they happen to be connected with; in other reſpects the treatment of ſuch ſores is nearly the ſame

ſame with thoſe originally of an unmixed ſimple nature.

5. THAT, in the topical treatment of ulcers of every kind, the principal object to be had in view, is, to reduce them as nearly as poſſible to the ſtate of ſimple purulent ſores; for which purpoſe the different remedies have been pointed out in the ſeveral preceding ſections.

6. THAT ulcers being once reduced to the ſimple ſtate above mentioned, their farther treatment, in general, becomes a very eaſy matter; the cure being then to be entirely effected by a proper attention to the three following circumſtances.

1*ſt*, To the introduction of an iſſue, as was lately obſerved, of ſuch a ſize as may carry off the ſame quantity of fluids the ſyſtem has, by means of the ſore, been accuſtomed to get free of.

2*d*, To the preſervation of the matter diſcharged in a purulent form, the ſeveral means for which have been already fully pointed out; but the principal of theſe, it may be remarked, are

are the avoiding every kind of irritation, by uſing the mildeſt dreſſings only, and preſerving, in the parts affected, a proper degree of heat.

3*d*, To the application of gentle compreſſion, not only upon the ulcer itſelf, but on the neighbouring ſound parts alſo: This, in the cure of every ſore, has been ſhewn to be a very material piece of practice.

THESE are, in ſhort, the principal circumſtances to be had in view in the management of ulcers, and which, in different parts of the preceding ſections, have been more fully explained.

CHI-

CHIRURGICAL ESSAYS.

PART III.

Obſervations on WHITE SWELLINGS of the JOINTS.

SECT. I.

Of the Symptoms and Cauſes of White Swellings.

§ 1. *General Remarks on White Swellings.*

THERE are not probably many diſorders to which the human body is liable, which prove either of worſe conſequences to patients, or that are leſs underſtood by practitioners than

White Swellings of the joints: Inſomuch that, whenever the diſeaſe is thoroughly formed, it is in general conſidered as incurable.

THIS ought certainly to be a very ſtrong inducement, with every practitioner, for carrying his reſearches with reſpect to it as far as poſſible, and will, it is hoped, be a ſufficient apology for theſe obſervations being now offered; for, ſo long as we remain, with regard to any circumſtance, in uncertainty, pointing out defects merely, though no material improvements ſhould be propoſed, may frequently, by exciting others to a farther proſecution of the inquiry, be a means, at laſt, of the ſubject being more accurately underſtood. And, if that effect ſhould, in any degree, be the reſult of the following remarks, I ſhall always conſider the time beſtowed on them as having been uſefully employed.

THE term *White Swelling* has commonly been applied to ſuch enlargements of the joints, as are not attended with external inflammation or diſcolouration of the ſkin and common teguments: The only ſymptoms which at firſt commonly take place, being a greater or leſs degree of ſwelling, with

with a deep seated pain. In the progress of the disease, indeed, the whole surrounding parts come to be so much affected, that inflammation is at last communicated to the skin itself, which terminating in abscesses and consequent ulcerations, it is not at all uncommon to find a great many openings surrounding the whole joints that are so diseased.

THOUGH there are, by different writers, several detached observations upon this complaint*, yet no regular account has ever been given of it, farther than what may be met with in general dissertations on diseases of the bones, they, *viz.* the bones having always been considered at the principal seat of such diforders.

§ 2. *Different species of white Swellings.*

THERE seems evidently to be two different species of white swellings, entirely distinct from one another;

* See two papers in Vol. IV. of Edinburgh Medical Essays, one by Dr Monro, and the other by Dr Simpson.——*See also*, A paper on this subject, inserted in a Collection of pathological Inquiries and Observations in Surgery, by Richard Browne Cheston, Surgeon to the Glocester Infirmary.

another; and as the one is of a much more mild nature than the other, very frequently admitting of palliation, and fometimes even of complete cures, which the other never does, it would ſeem to be a matter of importance, ſo to characteriſe the different varieties, that the one may be eaſily and certainly diſtinguiſhed from the other.

IT is in this, however, as in many other diſeaſes, that the complaint has frequently been of conſiderable ſtanding before practitioners are called in: So that although, if ſeen from the beginning, and through all its different ſtages, it might generally be eaſily enough known of what particular nature the diſorder in reality is, yet by being ſo much advanced as they frequently are, before aſſiſtance is deſired, and the exact hiſtory of the ſymptoms being ſeldom to be obtained from patients themſelves, it is often impoſſible in the latter ſtages of the diſeaſe, to make any accurate or certain diſtinction; the ſymptoms of both ſpecies being then commonly exceedingly ſimilar.

WHEN that is not the caſe, however, and the practitioner is called in before the ſymptoms have

have made any great progreſs, he may always, with a little attention, acquire almoſt a certainty with reſpect to the nature of the complaint. And, as I have had many opportunities of ſeeing every ſpecies of the diſorder, in all its ſeveral ſtages, I propoſe, firſt, to give as exact an account as poſſible, of the riſe and progreſs of the different ſymptoms in each ſpecies; then to mention the ſeveral appearances of the joints, which in each, are obſerved on diſſection, with the moſt common exciting and prediſpoſing cauſes of the diſorder; and laſtly, I ſhall enumerate the different remedies that I have known uſed for it, with their ſeveral effects.

SWELLINGS of this nature, it may be remarked, occur in every joint of the body; but much more frequently in the large, than in the ſmall joints: Thus there are probably twice the number to be met with in the knee and ankle joints, than are ever found in all the reſt of the body beſides.

§ 3. *Of the ſymptoms of the firſt, or rheumatic ſpecies of white Swelling.*

THE firſt and what may be conſidered as the moſt ſimple ſpecies of the diſeaſe, begins with an acute pain, which ſeems to be diffuſed over the whole joint, and frequently even extends along the tendenous and apaneurotic expanſions of ſuch muſcles as communicate with the joint. There is from the beginning, an uniform ſwelling of the whole ſurrounding teguments, which in different patients is in very different degrees, but it is always ſo conſiderable, as to occaſion an evident difference in point of ſize, between the diſeaſed and ſound joint of the oppoſite ſide: There is generally great tenſion prevails, but ſeldom in this period of the diſorder any external diſcolouration.

THE patient from the firſt commencement of the diſeaſe, receives the greateſt pain from motion of the joint, and always finding it eaſieſt in a relaxed poſture, it is, accordingly, kept conſtantly bent, which generally, in every ſituation, but more eſpecially in the knee, begets a ſtiffneſs or kind

kind of rigidity in the flexor tendons, which correſponds with it.

THIS rigidity of the tendons, has, by many, been conſidered as an original ſymptom of the diſorder, but when duly attended to, it will always be found to be rather a conſequence of the diſeaſe, and to have ariſen from the above mentioned cauſe. In conſequence too, of the total want of motion, which, from this circumſtance, is always produced, ſuch joints, in a very ſhort time, generally become quite ſtiff and immoveable, ſo as frequently, at firſt ſight, to have the appearance of complete and real anchyloſes.

IF the diſorder, either by nature or by the effects of proper remedies, is not now carried off, the ſwelling which originally was not very conſiderable, begins gradually to augment, and goes on, till it ſometimes acquires two or even three times the natural ſize of the part.

THE cuticular veins become turgid and varicoſe, the limb below the ſwelling decays conſiderably in its fleſhy muſcular ſubſtance, at the ſame time that it frequently acquires an equallity in point of thickneſs,

thickneſs, by becoming œdematous; the pain turns more intolerable, eſpecially when the patient is warm in bed or otherwiſe heated; and abſceſſes form in different parts of the ſwelling, and run in all different directions, at the ſame time that there frequently appears to be no immediate communication between the matters contained in them.

IN all theſe abſceſſes, a fluctuation of a fluid, upon preſſure, is generally evident, as is the caſe, in every collection of matter not very deep ſeated; but independent of that fluctuating ſenſation, all ſuch ſwellings afford a very peculiar elaſtic feel, yielding to preſſure, at the ſame time that they do not like œdematous ſwellings retain the mark, but inſtantly fill up any depreſſions, that by the finger, or otherwiſe, happen to be made in them.

THESE different collections, either upon breaking of themſelves, or on being laid open, diſcharge conſiderable quantities of matter, which, at firſt, is generally purulent, and of a pretty good conſiſtence; it ſoon, however, degenerates into a thin fœtid ill digeſted ſanies, and has never,

ver, at leaſt, in proportion to the quantity diſcharged, any remarkable influence, in reducing the ſize of the ſwellings, which ſtill retain nearly their former dimenſions.

IF the oriſices from whence ſuch matters flow, are not by art kept open, they very ſoon heal up, and new collections forming in different parts, again break out and heal as before: So that in long continued diſorders of this kind, the whole ſurrounding teguments, are often entirely covered with cicatrices, that remain after ſuch ulcers.

LONG before the diſorder has arrived at this ſtate, the patient's health has generally ſuffered conſiderably; firſt, from the violence of the pain, which is often to ſuch a degree, as to take away entirely both ſleep and appetite; and then, from the abſorption of matter into the ſyſtem, which always certainly takes place in ſome degree from its firſt formation in the different abſceſſes; but which, indeed, never appears ſo evidently, till the ſeveral collections either burſt of themſelves, or are by inciſion laid open; when a quick pulſe, night ſweats, and a weakning diarrhea, are always ſure to occur; and which, generally, at laſt,

carry off the patient, if the member is not either amputated, or if a cure of the diſorder is not in one way or another effected.

THESE are the ſeveral ſymptoms of this ſpecies of white ſwelling, in all its different ſtages: We ſhall now, as was propoſed, enumerate the appearances that in general are obſerved, on diſſecting ſuch ſwelled joints after amputation of the member.

§ 4. *Appearances obſerved on diſſection, in the firſt ſpecies of white Swelling.*

IN ſome caſes, the pain even in this ſpecies of the complaint, is from the beginning ſo violent, that practitioners are led at once to conclude it to be of the worſt and moſt incurable kind: And patients, rather than ſuffer a long continuance of ſuch a torment as it is often attended with, and after all, remain in uncertainty with reſpect to a cure being obtained, frequently prefer immediate amputation of the member.

SEVERAL ſuch inſtances I have ſeen, where the operation has been performed in very early periods of the complaints. In all of theſe, the only

ly preternatural affection obſerved on laying open the ſwellings, was, a conſiderable morbid thickneſs of the ſurrounding ligaments, without any diſeaſe of the joint whatever; the bones and cartilages always remaining perfectly ſound, as likewiſe the ſynovia, both with reſpect to quantity and conſiſtence.

THIS thickning of the ligaments, though, in general, it appears in a greater or leſſer degree, according as the complaint has been of long or ſhort ſtanding, yet it is not always the caſe; for, in ſome recent inſtances, the ligaments have appeared more diſeaſed than in others where the diſorder had continued longer: In the former, indeed, the ſymptoms were always found to have been very violent.

IN the more advanced ſtages of the diſorder, when abſceſſes have formed in different parts, when the pain has been long very violent with great addition of ſwelling, on laying open the parts, the thickning of the ligaments is then found more conſiderable, and is generally, if not always, attended with an effuſion into the ſurrounding cellular ſubſtance, of a thick glairy kind

kind of matter, which appears to be the cauſe of that ſpringy feel peculiar to ſuch ſwellings, as was formerly taken notice of in the deſcription.

THE different abſceſſes or collections of matter, are found to run in various directions through this glairy albumenous kind of ſtuff, without, however, ſeeming to mix with it. In ſome few inſtances again, together with collections of pus, a great many ſmall hydatides are obſerved; and in the farther progreſs of the diſorder, all theſe together form ſuch a confuſed maſs of different matters and ſubſtances, that it is almoſt impoſſible, by diſſection, to trace them farther than is at once obſerved on their firſt being laid open.

EVEN all theſe appearances I have known occur, without any affection of the bones of the joint, both they and the ſurrounding cartilages, upon cutting through the capſular ligaments, remaining perfectly ſound.

WHEN, however, by a very long continuance of the complaint, theſe ligaments come to be corroded by the different collections of matter, the

the cartilages then, and in conſequence the bones, are very ſoon brought to ſuffer, the latter becoming carious, ſo ſoon as the former, by the acrimony of the matter, have been abraded.

THE tendons of the flexor muſcles, which are always in this diſeaſe, as was already mentioned, very ſtiff and much contracted, do not, upon diſſection, afford any evident morbid appearances, either with reſpect to hardneſs or enlargement. We ſhall now, as was propoſed, give a deſcription of the other ſpecies of the diſorder.

§ 5. *Of the Symptoms of the more inveterate or ſcrophulous ſpecies of white Swelling.*

IN this ſpecies of the diſeaſe, the pain is commonly very violent, more acute generally than in the other, and inſtead of being diffuſed, is more confined to a particular ſpot, moſt frequently to the very middle of the joint: In ſome inſtances I have known the patients ſay they could cover the whole pained part with the ſize of a crown-piece or leſs.

THE

THE ſwelling is at firſt commonly very inconſiderable, in ſo much that, on ſome occaſions, even when the pain has been very violent, very little difference, in point of ſize, can be obſerved between the diſeaſed and ſound joint of the oppoſite ſide. In this, as in the other ſpecies of the diſeaſe, the leaſt degree of motion always gives very great pain, ſo that the joint being here too conſtantly kept in a bent poſition, that ſtiffneſs and rigidity of the tendons come likewiſe ſoon to be produced.

As the diſorder advances, the pain turns more violent, and the ſwelling becomes more conſiderable, with an evident enlargement of the ends of ſuch bones as compoſe the joints.

IN proceſs of time, the tumour gets that elaſtic feel formerly taken notice of, varicoſe veins appear over its ſurface, and collections of matter occur in different parts of it: Theſe, upon burſting or being laid open, diſcharge conſiderable quantities, ſometimes of a purulent like matter, but moſt frequently of a thin fœtid ſtuff; and if a probe be introduced, and can be paſſed to the bottom of the ſores, the bones are found carious, and

and pieces of them are often diſcharged at the openings.

ON the farther continuance of the diſorder, the conſtitution comes here likewiſe to ſuffer as in the firſt ſpecies of the diſeaſe; and a diarrhea, with night ſweats commencing, the patient is ſoon reduced from perhaps the fulleſt habit, to little more than ſkin and bone.

§ 6. *Appearances obſerved on diſſection, in the ſcrophulous ſpecies of white Swelling.*

UPON ſuch joints being diſſected, either after death, or after amputation of the member, in the firſt ſtages of the diſorder, the ſoft parts ſeem very little affected; but in all, even the ſlighteſt that I had ever an opportunity of ſeeing, there was conſtantly obſerved, an enlargement either of the whole ends of the bones, or of their epiphiſes; frequently of thoſe on one ſide of the joint only; in others again, the bones on both ſides have been affected.

THIS enlargement ſometimes occurs, without any other evident diſeaſe, but in general, and always

ways in a more advanced ſtate of the complaint, the ſoft ſpungy parts of ſuch bones, appear diſſolved into a thin, fluid, fœtid matter, and that too, in ſome caſes, without the cartilages which ſurround them ſeeming much affected. In proceſs of time, however, the cartilages come likewiſe to be diſſolved, and then the different matters, *viz.* that of the bones and ſofter parts, all mixing together, ſuch ſwellings being in that ſtate laid open, exhibit a ſtill more confuſed collection than is generally obſerved, even in the worſt ſtages of the other ſpecies of the diſorder.

ALTHOUGH it was remarked, that, in the early periods of the complaint, the ſurrounding ſoft parts do not always appear much affected, yet, in its farther progreſs, they likewiſe are always brought to ſuffer. The ligaments become thickned, and the contiguous cellular membrane ſtuffed with that viſcid glairy kind of matter, as obſerved in the other ſpecies of the diſorder.

§ 6.

§ 7. *Of the Causes of white Swellings of the Joints.*

HAVING thus given a particular account of the different appearances generally observed in both species of white swelling, we come now, in course, to the consideration of the different causes which tend to produce them: And, to go on in the same order with the descriptions that have been given, we shall first enumerate those that are particularly connected with that which we termed the first or *Rheumatic* species of the disorder.

IN this way may be mentioned as causes, all such strains as particularly affect the ligaments of the joints, so as to produce inflammation; likewise bruises, luxations of the bones, and, in short every affection which can, in any degree, be attended with that effect.

A rheumatic dispositon, or diathesis as it is termed, may here too be taken notice of as a principal cause of this species of white swelling; for, in every rheumatic affection, the parts most liable to be attacked are the ligaments of the

joints, and other deep ſeated membranes. The diſorder occurring moſt frequently in the large joints, eſpecially in the knee, is a ſtrong argument too for the rheumatic diſpoſition having a conſiderable influence in its production; for it is well known that rheumatiſm, in its moſt evident form, does really more frequently attack the larger joints than any of the ſmaller: And, in fact, we find this ſpecies of white ſwelling occurs more frequently in young plethoric people, in whom the rheumatic diatheſis moſt frequently prevails, than it ever does in thoſe of an oppoſite temperament.

THAT it is the ligaments of the joints only which are firſt affected in this diſorder, is from the hiſtory of the diſſections, rendered evident; they, in the firſt ſtages of the complaint, being almoſt the only parts that are found diſeaſed. The effuſions into the cellular membrane of that thick glairy matter taken notice of, are probably occaſioned by an exudation from the veſſels of theſe ligaments that have been originally inflamed, it being known that ſuch parts never furniſh a proper fluid for the formation of purulent matter: In the courſe of the diſeaſe, indeed, abſceſſes

ſceſſes containing real pus do always appear, but never till inflammation has been communicated to the ſurrounding parts, which more readily afford a fluid proper for that purpoſe.

I would therefore, upon the whole, conclude, that this ſpecies of white ſwelling is at firſt always occaſioned by *an inflammatory* or *rheumatic affection* of the ligaments of ſuch joints as it attacks, and that too from whatever cauſe ſuch inflammation may originally have proceeded.

THE other ſpecies of the diſorder, from all the ſymptoms enumerated, and from the different appearances on diſſection, ſeems evidently to be originally an affection of the bones; the ſurrounding ſoft parts coming only to ſuffer in the progreſs of the diſeaſe, from their connection with, and vicinity to theſe.

THIS ſpecies of white ſwelling very ſeldom occurs, as the conſequence of any external accident; generally beginning without the patient being in the leaſt able to account for it, and from the effects which it uſually produces on the bones attacked, it would appear to be a ſpecies of the real

real *ſpina ventoſa*, and which again is very probably a diſeaſe of the ſame nature in the bones, as ſcrophula is of the ſoft parts. Indeed, the appearances of the two diſorders, after making allowance for their different ſituations, are exceedingly ſimilar; they both begin with conſiderable enlargements or ſwellings of the parts they invade, which afterwards in both, too, generally end in evident ulcerations; and they both likewiſe frequently occur in the ſame perſon and at the ſame time.

IT is likewiſe obſerved, that this ſpecies of white ſwelling is generally either attended with other evident ſymptoms of ſcrophula ſubſiſting at the time; or that the patient in an earlier period of life has been ſubject to that diſeaſe; or, what is nearly the ſame, that he is deſcended from ſcrophulous parents, and conſequently, moſt probably, has the ſeeds of that diſeaſe lurking in his conſtitution.

FROM all theſe circumſtances, it may, I think, with probability be concluded, that this ſpecies of white ſwelling is commonly, if not always, of a ſcrophulous nature; and it having already been

ſhewn,

ſhewn, that the other ſpecies of the diſorder is to be conſidered as an inflammatory, or what we have termed a rheumatic affection; and, a thorough diſtinction of the two different ſpecies being in the treatment a matter of very great importance, it will not here be improper to give a ſhort enumeration, of the ſeveral diagnoſtic or moſt characteriſtic ſymptoms of each.

§ 8. *Diagnoſis.*

The pain in the white ſwelling from a rheumatic diſpoſition, is, as was formerly remarked, always, from the beginning, diffuſed over the whole joint, and on ſome occaſions, extends even a conſiderable way along the muſcles that are attached to it: Whereas, in the other ſpecies of the diſorder, the pain is not only always at firſt, but ſometimes, even when the complaint has been of conſiderable ſtanding, confined to a very ſmall circumſcribed ſpace.

In the former the ſwelling is always confined to the ſoft parts, and is from the beginning exceedingly evident; but in the latter, there is ſeldom for ſome time any perceptible ſwelling, and when

when it does more ſenſibly appear, the bones are found evidently to be the parts chiefly affected, the ſurrounding teguments coming only to ſuffer on a farther progreſs of the diſeaſe.

THESE are the chief local differences of the two ſpecies of this diſorder; but ſome aſſiſtance in the diſtinction may likewiſe be obtained, from the general habit of the patient, and from the manner in which the complaint may ſeem to have been produced.

THUS, when ſuch ſwellings occur, in young, ſtrong, plethoric people, eſpecially in ſuch as have formerly been ſubject to rheumatiſm, and that whether in conſequence of an immediate external accident or not, ſuch, moſt probably, will always prove to be of the mildeſt, or rheumatic ſpecies of the diſorder.

WHEREAS, when ſwellings of this nature appear in ſuch patients as are otherwiſe evidently of ſcrophulous diſpoſitions, where together with a fine ſkin and delicate complexion, there are either, on examination, found hardened glands in the neck, arm-pits, or inguina; or, it is diſcovered,

covered, that the patient has, from his anceſtors, a title to ſuch complaints; when either any, or all of theſe circumſtances occur, and if the diſorder has begun in the manner formerly deſcribed, without any *evident external cauſe*, we need be under very little doubt in concluding it to be of a ſcrophulous nature.

THE great utility of properly diſtinguiſhing the two different ſpecies of white ſwelling, appears in no circumſtance ſo evident as in the treatment: In the one there being ſome chance by proper remedies of being ſerviceable to the patient; whereas in the other, *viz.* the ſcrophulous, it is not probable that art will ever be able to afford much aſſiſtance.

SEC-

SECTION II.

Of the Treatment of white Swellings.

§ 1. *Of the Effects of an antiphlogiſtic Courſe in the rheumatic Species of white Swelling.*

IN the rheumatic white ſwelling, as it is always at firſt evidently of an inflammatory nature, conſiderable advantages are commonly obtained by a due attention to a proper antiphlogiſtic courſe.

THE firſt remedy, which, with this view, ſhould be put in practice, is blood-letting; but inſtead of general evacuations from the arm or elſewhere, it proves always more effectual to take the blood immediately from the part affected: Cupping and ſcarifying is here a principal remedy; the inſtrument ſhould be applied to each ſide of the diſeaſed joint, on each ſide of the rotula for

for inſtance, when the knee is the part affected, and at leaſt eight or ten ounces of blood diſcharged; and this to be repeated at proper intervals, once, twice or oftener, according to the violence of the ſymptoms, and ſtate of the patient's ſtrength at the time.

IN the ordinary way of diſcharging only an ounce or two of blood by this operation, it has, in general, very little or no influence; but in the quantities mentioned, and which, by thoſe accuſtomed to the practice, is commonly eaſily obtained, it moſt frequently is attended with very conſiderable effects.

IT muſt here be obſerved, that cupping is, in theſe caſes, much ſuperior to leeches, which is not only a more tedious method of getting the ſame quantity of blood, but the ſwelling occaſioned, by the application of any conſiderable number of theſe animals, proves frequently very troubleſome; and what is often of worſe conſequences, gives ſometimes an interruption, for a time, to the uſe of other remedies.

UPON the anterior part of the joint, where the cupping glaſſes have not been placed, a ſmall bliſter ſhould be directly applied, and the part kept open with iſſue-ointment, till the wounds from the ſcarificator are ſo far healed, that a veſicatory may likewiſe be laid on one ſide of the joint; and ſo ſoon as that is nearly healed, the other ſide ſhould be alſo bliſtered.

BY thus alternately applying them, firſt to the one ſide, and then to the other, almoſt a conſtant ſtimulus is kept up, which, in deep ſeated inflammations, ſeems to have fully a greater influence than all the diſcharge occaſioned by bliſters.

GENTLE cooling laxatives, at proper intervals, are here of uſe too; and the patient ſhould, in every reſpect, be kept upon a ſtrict antiphlogiſtic courſe, both as to diet and every other circumſtance: From a due attention to which, with a continuance of the topical treatment already recommended, I have frequently obſerved very conſiderable advantages, more indeed than from any other remedies I ever ſaw uſed in this complaint.

It is in the firſt ſtages only, however, of the diſeaſe, that ſuch a courſe can probably be of much ſervice; and in ſuch, I am, from experience, convinced, that it has frequently been a means of curing diſorders, which otherwiſe would probably have proceeded to the laſt ſtages of white ſwellings.

The original inflammatory affection being once over, theſe ſort of drains ſeem to have little or no influence, and ought not then to be long perſiſted in, as tending to prevent the uſe of other remedies, which, in an advanced ſtate of the diſeaſe, prove commonly more efficacious.

§ 2. *Of the Effects of Mercury, Friction, and other Remedies, in the more advanced Stages of white Swelling.*

The inflammation being moſtly gone, and while there are yet no appearances of the formation of matter, mercury, in theſe circumſtances, I have ſometimes known of uſe, not given ſo as to ſalivate, but merely to affect the mouth gently, and to keep it ſomewhat ſore for a few weeks.

The

THE beſt form of uſing mercury, in ſuch caſes, is certainly by way of unction, as it allows, at the ſame time of the application of friction, which, in all ſuch ſwellings, may of itſelf be, in ſome meaſure, conſidered as a remedy. For this purpoſe, an ointment of quick-ſilver and hog's lard ſhould be prepared, but with ſo ſmall a proportion of the former, that the patient may admit of two drachms of the ointment being rubbed in, three times a day. In order to rub that quantity of the medicine in with gentle friction, an hour each time is, at leaſt, neceſſary, and which is as little as ſhould ever be given, in order to receive all the advantages that attend the practice; for however uſeful friction, in ſuch caſes, may be when properly applied, in the ordinary way of continuing the remedy for a few minutes only, it is not probable it can ever have much influence.

GENTLE mercurials given internally, are here ſometimes of ſervice too; but, as all the advantages to be derived from them in that form, are obtained from the unction, together with that of the friction neceſſary for its application, the latter, in all ſuch caſes, ſhould certainly be preferred.

By

BY Le Dran, and other French writers, falls of warm water on ſwellings of this nature are much recommended, and I have no ſort of doubt but a long continued and reiterated application of that remedy may, in the firſt ſtages of ſuch complaints, be often attended with very good effects; a few inſtances of this I have ſeen indeed, but never having had proper opportunities for making the application, I cannot, from experience, ſay much upon the ſubject: Only, from the well known relaxing property of moiſture when conjoined with heat, there is the greateſt reaſon to think, that a proper uſe, eſpecially of warm emollient ſteams, would, in all ſuch diſorders, be found a very powerful remedy.

IN the uſe of warm water in caſes of white ſwelling, the friction occaſioned by its fall on the part, independent of every other circumſtance, may probably have a very conſiderable influence: At leaſt this, I think, is the principal effect, which *cold water* can, in that way, produce; I have known it frequently uſed, and, on ſome occaſions, with advantage.

BY

BY a proper uſe of theſe different applications, *viz.* of the ſeveral topical remedies in the firſt or inflammatory ſtate of the diſeaſe; and afterwards, ſtill, however, before the formation of matter, of mercurials, friction, *&c.* many affections of this nature have been entirely removed: But, in many inſtances, when, either by the uſe of medicines, or by an effort of nature, the ſwelling and pain are almoſt entirely, or even wholly removed, it frequently happens, by the bent poſition the limb has been for a long time kept in, that the uſe of the joint comes to be entirely loſt, having often acquired ſuch a degree of ſtiffneſs, that any attempts to move it are commonly attended with very great pain.

UNLUCKILY, in all ſuch caſes, theſe affections of the joints have been conſtantly attributed to one or other of two different cauſes, which are both in their natures incurable, *viz.* either to the ends of ſuch bones as compoſe the joints having run into one another, ſo as to become firmly conjoined in conſequence of the ſurrounding cartilages being abraded; or, to the *inſpiſſation*, as it is termed, of the *ſynovia* of the joints, whereby their cavities are ſuppoſed to be entirely filled up, and

and no ſpace thereby left for the future motion of the different bones.

BOTH theſe opinions, however, I can, from a great number of facts, aſſert to be, in general at leaſt, very ill founded; for although, by an abraſion of the cartilages which ſurround the different bones at the joints, an union of their extremities may very readily be occaſioned, and is no doubt, *on ſome occaſions*, the cauſe of ſuch affections, yet, from a variety of diſſections, I am convinced that it is an exceeding rare occurrence, and, in caſes of white ſwelling, never happens but in the moſt advanced ſtages of the diſorder; the only cauſes, almoſt, of the ſtiffneſs of joints, in ſuch caſes, being that contracted ſtate of the flexor tendons, formerly taken notice of in the deſcription; at leaſt in nineteen caſes out of twenty it probably is ſo.

THERE is nothing indeed more deceiving than the feel on ſuch occaſions; for when the diſorder has been of long ſtanding, the ſtiffneſs and immobility are generally ſo conſiderable, as at firſt ſight, always to appear as if a real conjunction of the bones certainly ſubſiſted: Many inſtances

ſtances of which I have known, that had been all along conſidered as real anchyloſes of the worſt kind, but which, on diſſection, were conſtantly found to proceed merely from a contracted ſtate of the flexor muſcles and tendons.

WITH reſpect to the other opinion, which formerly ſo univerſally, and with many ſtill does prevail, of ſuch affections generally proceeding from an inſpiſſated ſtate of the ſynovial fluid, it has, for ſometime, by many anatomiſts, been much doubted if it ever occurs; and from all the opportunities I have had of diſſecting ſuch diſeaſed joints, I am pretty much convinced, that it either never does take place; or, at leaſt, that it is an exceeding rare occurrence. For, in every caſe of this kind, even when the diſeaſe had been of very long continuance, if the capſular ligament of the joint remained undivided, ſo that no matter from the ſurrounding ſoft parts got admittance, and when the ends of the bones were not become carious, the ſynovia always retained its natural appearances, both in colour and conſiſtence: So that it is very probable, the many cauſes of diſeaſed joints, attributed to affections of that fluid, have been

been more founded on mere hypotheſes, than on facts and experience.

THIS ſtiffneſs of the joint, therefore, which, to a certain degree, always occurs in white ſwellings, proceeding ſeldom or never from either of the cauſes mentioned, which might probably both be conſidered as incurable, but merely from a preternatural contraction of the muſcles and tendons, we have, from that circumſtance, great reaſon to expect, that in many ſituations a good deal may be done towards its removal. And in fact, there is no ſort of doubt but complaints of this kind, which often remain after every other ſymptom of white ſwelling has diſappeard, may, on many occaſions, be got the better of, merely by a long continued uſe of emollients; ſeveral inſtances, indeed, of this, I have ſeen, ſome of which had been thought to be of the worſt ſpecies of anchyloſis.

THE beſt and probably leaſt offenſive emollient that can be uſed, is pure olive oil applied warm; as much of it as can be eaſily rubbed in by an hour's gentle friction, ſhould be regularly done at leaſt three times a day, and inſtead of confining

the friction altogether to the rigid tendons as is commonly done, it ſhould be extended over the whole muſcles, even to the inſertions of their other extremities; but more eſpecially on their fleſhy muſcular parts, where the principal cauſe of the continuance of ſuch complaints is probably ſeated; theſe parts being chiefly, if not altogether poſſeſſed of the contractile, and, conſequently, of the reſiſting powers.

I have known uſed too in this complaint, as an emollient, and often with advantage, an oil extracted from animal ſubſtances, known by the name of *Neats foot oil;* but as it is more apt to turn rancid than olive oil, it is not, therefore, ſuch a pleaſant application, and not being poſſeſſed of any ſuperior relaxing properties, the other will probably, for that reaſon, be commonly preferred.

THE diſorder now under conſideration, *viz.* a ſtiff joint, is ſo evidently one of thoſe which particularly require the uſe of emollients, that almoſt every old woman has ſome particular form or other of recommending them; one of which I cannot avoid mentioning, as I have frequently known

known it uſed, and in two caſes, particularly, with very evident advantages, *viz.* The web or omentum of a new killed ſheep, or of any other animal, to be applied over all the diſeaſed parts directly on being cut out of the animal.

IN the two caſes alluded to, one was in the knee, and the other in the hand, and the joints from having been totally uſeleſs, were almoſt perfectly reſtored: The application ſhould be renewed as frequently as poſſible, once a day at leaſt, or oftener when it can be done, for on being more than four or five hours applied, it becomes diſagreeable; and, after that time, indeed, as it commonly turns ſtiff, it cannot then probably be of much ſervice. The ſame kind of remedy, uſed in ſomewhat a different manner, I find recommended by LIEUTAUD a celebrated French practitioner.*

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* Mr Lieutaud ſays, when ſpeaking of ſuch affections, "Obvolvitur etiam pars affecta pelle callida vervecis, vetuli alteriuſve pecudis, recens mactati, vel immittitur imum ventrum bovis, vitali caloræ haud defraudate." Synopſis Univerſæ Praxeos Medicæ, Vol. I. p. 400.

I have been the more particular on this part of the ſubject, as I have often thought, with a little attention, the uſe of many joints might be recovered, which, from a miſtaken notion concerning their cauſes, have generally from the firſt been conſidered as incurable.

THE diſorder has hitherto been ſuppoſed, not to be ſo far advanced, as to have occaſioned the formation of matter, for when come that length, no conſiderable advantages can be expected from any of the remedies as yet recommended; but even in that ſtate of the complaint, if the patient's health does not abſolutely require it, amputation of the member ſhould by no means be immediately had recourſe to as it moſt frequently is. For, by paying attention to open the different abſceſſes ſoon after their formation, the matter may, in that way, be pretty certainly prevented from deſtroying the capſular ligaments of the joints, which, if once effected, would no doubt, in time, render that operation neceſſary.

AND by the uſe of the ſeton, as was formerly directed in other caſes of impoſthume, the diſcharge

charge of such collections is certainly and easily effected, is never attended with any inconvenience, and has sometimes, and may frequently be a means of saving many such diseased joints. At least, when a limb is at stake, the practice recommended is on all occasions worth trying, and there never, it is probable, can be any well grounded objection made to it, unless the patient's constitution be so much reduced as to render any farther delay attended with considerable risk, in which case, amputation is, no doubt, to be immediately had recourse to; though if such abscesses as occur, be opened directly on their first formation, there will always be sufficient time for observing what effects are to be obtained from the discharge so produced.

IT may here be observed too, with respect to the most proper period of the disease for amputating such limbs, that even, in point of success from the operation, it ought never to be advised till the complaint is pretty far advanced; for though, *a priori*, it might be imagined, that the more early, in the disease, amputation of the member is had recourse to, the more successful it should prove, and although this, indeed, has been

been made a common argument for amputating very early in every caſe of white ſwelling, yet, however plauſible the obſervation may appear, it will not, from experience, I am certain, be found to hold good. For, in this diſorder eſpecially, I have conſtantly obſerved, that amputation has more frequently ſucceeded, that is, a greater proportion of ſuch patients have recovered from it, who have previouſly been conſiderably reduced by diarrheas, and other weakning ſymptoms, than of ſuch as have ſtill remained in a full plethoric habit of body.

IN the former, when the conſtitution has not been *too much* broke, and which practitioners have always in their power to guard againſt, the ſeveral ſymptoms of hectic, which previouſly took place, are commonly removed in a very few days after the limb is taken off: No high inflammatory affections are ever produced, the patient daily mends in his health, and a complete cure, if the patient has not been *too much reduced*, is generally very ſoon obtained. In the latter again, the very reverſe of all theſe circumſtances occur, the patient, from being in high health at the time of the operation, is generally thrown into a

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ſmart inflammatory fever, which is, no doubt, very often got the better of; but which frequently either carries off the patient immediately, or produces ſuch effects as he never thoroughly recovers from.

So that in no caſe whatever ſhould amputation be had recourſe to, until every probable means for ſaving the limb has been tried in vain.

ALL the different obſervations hitherto made upon the treatment, relate particularly to the rheumatic ſpecies of the diſorder, and when had recourſe to in time, and duly perſiſted in, they will frequently be found of ſervice; but when the diſeaſe is ſo far advanced as to have deſtroyed the capſular ligaments of the joint, and perhaps even the cartilages and bones themſelves, amputation of the member is then no doubt the only reſource.

IN the more fatal ſpecies of white ſwelling, *viz.* the ſcrophulous, as I know no certain remedy for ſcrophula even in its milder form in the ſoft parts of the body, I cannot here pretend to offer any thing ſatisfactory upon the ſubject.

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IN the ſmall joints, when the diſeaſed parts of the bone begin to caſt off, a cure may in that way, by aſſiſting the efforts of nature, be ſometimes obtained; but in all the large joints, as the knee, ankle, *&c.* it is not probable that any other reſource than amputation will ever afford much relief; and even the effects of that operation can ſeldom be depended on as laſting; for when the general ſcrophulous taint ſtill ſubſiſts in the conſtitution, the diſorder will moſt probably appear again in ſome other part; which, however, in the advanced ſtages of the diſeaſe, it is ſometimes neceſſary to run the riſk of, the pain being often ſo tormenting as to make it more eligible to ſubmit to any hazard rather than to bear it longer.

WHEN, however, for ſome reaſon or other, amputation is determined againſt, as there being almoſt a certainty of the complaint ſoon returning, from the ſcrophulous diſpoſition appearing very ſtrong in the ſyſtem, it then becomes neceſſary to have recourſe to palliatives, ſo as to render the complaint as tolerable as poſſible; and, with this view, opiates in large doſes, by moderating the pain and procuring reſt to the patient, will, in general, be found the principal remedy.

IN

IN other reſpects, all ſuch medicines and articles of regimen as are found beneficial in ſcrophula, may be had recourſe to; and for which, as it would be foreign to the intention of this paper to give an enumeration of them, a former ſection of the ſecond part of this work, together with ſuch authors as have wrote more fully on the ſubject, may be conſulted.

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